MARKET FORECAST

Federal Professional Services Market FY 1996–FY 2001

Federal Market Analysis Program

Federal Professional Services Market

FY 1996–FY 2001

INPUT®

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Federal IT Market Analysis Program

*Federal Professional Services Market,
FY 1996–FY 2001*

Abstract

According to this report, *Federal Professional Services Market, FY 1996–FY 2001*, the federal market demand for vendor-furnished professional services will increase from $5.6 billion in FY 1997 to $7.5 billion in FY 2001 at a compound annual growth rate of 6%.

The most significant change in the fiscal year 1997 budget was an increase in commercial services, indicating a strong continuing signal that the federal government will be contracting out more and more of its professional services. Professional services represent major contract commitments, but application development will be reduced in favor of commercial solutions.

Government end-users will continue to be faced with declining personnel levels, tightened federal funding and the need to increase the efficiency of information resources over the next several years, all of which will drive the growth rate of the professional services market above the projected growth of the total federal IT market. The current and projected need for contractor assistance makes the federal government the largest potential user group for professional services in the U.S.

At $3.9 billion, civilian agencies accounted for 71% of the total professional services market in FY 1996, with DoD accounting for the remaining 29%. Based on projected growth rates, civilian agencies are expected to command approximately 75%, or $5.8 billion, of the total professional services market in FY 2001.

The professional services market is commonly conceptualized as three basic delivery modes — software development, design and consulting and education and training. In this report, INPUT also analyzes professional services as they pertain to systems integration and outsourcing requirements within the federal government.

INPUT forecasts information technology budgets by agency based on spending in obligations as reported to the Office of Management and Budget. To estimate current and potential future agency spending by specific professional services delivery modes, INPUT analyzes historical spending patterns by agency and considers existing and projected market trends that may affect spending on professional services. Based on these analyses, comprehensive forecasts and program trends are provided for those agencies — both civilian and Defense — with leading expenditures on total professional services and specific professional services submarkets.

To develop a picture of the major players in the federal professional services market, INPUT examined net contract obligations compiled by GSA to show the top 10 vendors in terms of total professional services obligations reported during fiscal year 1996. INPUT provides an overview of the competitive arena in the federal professional services market, as well as a more in-depth analysis of the leading players among professional services contractors.

In this report, INPUT also looks at the agency perceptions of the advantages and disadvantages of vendor-provided professional services along with preferred vendor characteristics, including vendor type, vendor qualifications and vendor performance. In addition, INPUT reports on the agency suggestions on what vendors could do to make their services more valuable.

This report analyzes trends, issues, agency perceptions and the competitive environment, and it gives recommendations that will help vendors maintain the competitive edge that will propel them into the twenty-first century.

This report contains 166 pages, including 92 exhibits.

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I

Introduction

Federal Professional Services Market, FY 1996–FY 2001, is produced by INPUT as part of the Electronic Government Market Action Reports Program (EG/MAR). This report forecasts information technology services expenditures by the U.S. federal government for fiscal years 1996 to 2001.

INPUT initiated EG/MAR for information industry clients in the federal government market. Since the program began, INPUT annually asks interested clients to identify specific business areas, service modes and issues they consider essential for their federal market planning. Their suggestions have been incorporated into EG/MAR and have led to the selection of this quarterly strategic perspective report as an appropriate vehicle for providing the information. During calendar year 1997 under EG/MAR, INPUT will continue the program initiated in 1993 to publish profiles of federal agencies. These profiles provide an executive summary of information technology (IT) activities and trends in a federal agency, including mission, organization, program activities, program budget, IT budget, IT contract opportunities, top contractors and contracts, as well as issues.

INPUT does not detail the full spectrum of information systems and services opportunities in each fiscal year because there are more than 35,000 individual procurements annually. Instead, this report examines the driving factors and establishes the basis for forecasting individual service mode growth prospects. INPUT selects major service modes for analysis based on both client interest and major program initiatives of the Administration. Major initiatives of the Administration begun in 1993 have created interest in programs dealing with business process re-engineering (BPR), high-performance computing, network management, electronic mail (e-mail), electronic commerce, document management, the Internet and the World Wide Web.

The companion Federal Information Technology Procurement Program (FIT) focuses on contract opportunities for significant new or recompete business potential for INPUT's vendor clients. The Procurement Analysis Report (PAR) database, accessible via the Internet or in a desktop version, provides more than 500 of these opportunities. INPUT distributes a newsletter summarizing recent database updates and procurement issues to federal vendor clients monthly. However, this market analysis report provides more strategic intelligence and trends within specific delivery modes and by agency.

A

Scope

This report covers only the U.S. federal government information technology market and includes only those expenditures expected of the executive branch agencies. INPUT bases its analysis on actual outlays from FY 1987 through FY 1995, the federal estimate for FY 1996 and the federal forecast for FY 1997. Note that embedded computer systems are not included in our data. IT outlays for classified national defense and intelligence programs are also not included.

The major service modes included in this report are:

❑ Basic professional services

❑ Systems integration professional services

❑ Outsourcing (includes systems operations)

The service modes are defined in Appendix A. The definitions were revised in 1996 to clarify some subsets of the service modes, which are identified as special delivery modes, in response to client requests. The expenditures for the submodes identified are part of the service modes listed above and, therefore, not additive to them.

Funding information in this report is rounded to the nearest $1 million, unless otherwise noted. In general, the funding information is initially derived from plans and budget requests not yet approved by the Congress nor confirmed by the Office of Management and Budget (OMB) and may change even after approval. Such changes may be dictated by the Administration or subsequent congressional action.

B
Methodology

To identify key expenditures in the service modes described above, INPUT analyzed the Office of Management and Budget (OMB)/General Services Administration (GSA)/National Institute of Standards and Technology (NIST) documents, the Budget of the United States Government, federal agency OMB Circular A-130 information technology plans and the federal agency OMB Circular A-11, Exhibit 43 Information Technology Budget Requests.

Because agencies are not required to submit supporting data for plans to OMB, INPUT requested additional documentation on their OMB A-11 submissions and long-range information resource management plans and reviewed the documentation for guidance on the forecast. Interviews with agency policy and procurement officials were conducted to identify technology trends, policy changes and issues associated with plans to improve federal information resources and the acquisition process. The section on market trends was prepared after the interviews and research on the current information technology budget submission were completed.

The INPUT forecast of five fiscal years' growth by service mode is based on the OMB Circular A-11, Exhibit 43 budget requests and off-budget plans covering various federal funds and public corporations.

INPUT established the economic factors for the five years under the commercial Market Analysis Program (MAP) and employed these factors for all INPUT program forecasts. The growth guidelines are developed from annual INPUT surveys of users, vendors and INPUT-developed models. The growth rates used for this forecast are indicated in Exhibit I-1.

Exhibit I-1

1996 GDP and Inflation Growth Rate

Overall Percent	1996 Est.	1997 Est.	1998 Est.	1999 Est.	2000 Est.	2001 Est.	Average 1996–2001
Nominal GDP[1]	5.5	5.6	5.7	5.5	5.5	5.5	5.6
GDP Deflator	3.3	3.3	3.1	3.1	3.0	3.0	3.1
Real GDP[2]	2.2	2.2	2.3	2.6	2.4	2.4	2.4

Notes: Source: INPUT
(1)   Total of GDP Deflator and Real GDP may not add due to rounding.
(2)   Constant 1987 dollars.

Most economic observers now agree that growth should stabilize at around 2%. There is also general agreement that the economy seems to be in a minimal expansion mode, and that long-term, the risk of recession in 1997 is low. Gross Domestic Product (GDP) figures have been adjusted from last year's estimates to conform to this new economic profile for the next five years.

INPUT segments the market, modeling the way federal users buy products and services, into eight categories with 27 subcategories. This report focuses only on professional services, systems integration and outsourcing. The following are the eight categories:

❑ **Systems Software Products** - mainframe, minicomputer, workstation/PC

❑ **Applications Software Products** - mainframe, minicomputer, workstation/PC

❑ **Turnkey Systems** - equipment, software products, professional services

❑ **Professional Services** - consulting, BPR, education/training, software development maintenance

❑ **Systems Integration** - equipment, software products, professional services, other

❑ **Outsourcing** - platform operations, applications operations, desktop services, network management, applications management

❑ **Processing Services** - transaction, utility, other

❑ **Network-Based Services** - electronic information services, network applications.

As shown in Exhibit I-2, both agency and industry perspectives are gathered to create a government user demand profile:

❑ INPUT pulls federal budget information from federal agency submissions made to the OMB. Agency strategic IT plans are gathered. Key agency information resource management (IRM) officers are interviewed for insights into future plans.

❑ INPUT gathers procurement data on 208 product/service codes (PSC) from the GSA Federal Procurement Data Center (FPDC) — federal agencies are required to report procurement data, including the contract obligation amount, on procurements exceeding $25,000.

Exhibit I-2

Methodology

- Agencies
  - Interviews
  - A-11 43s
  - Strategic Plans

- Vendors
  - Interviews
  - FPDC PSC Data
  - Strategic Direction

AGENCY PROFILES   PARs   CONTACTS EVENTS   FAIT   VENDOR PROFILES

FOCUS ON USER DEMAND
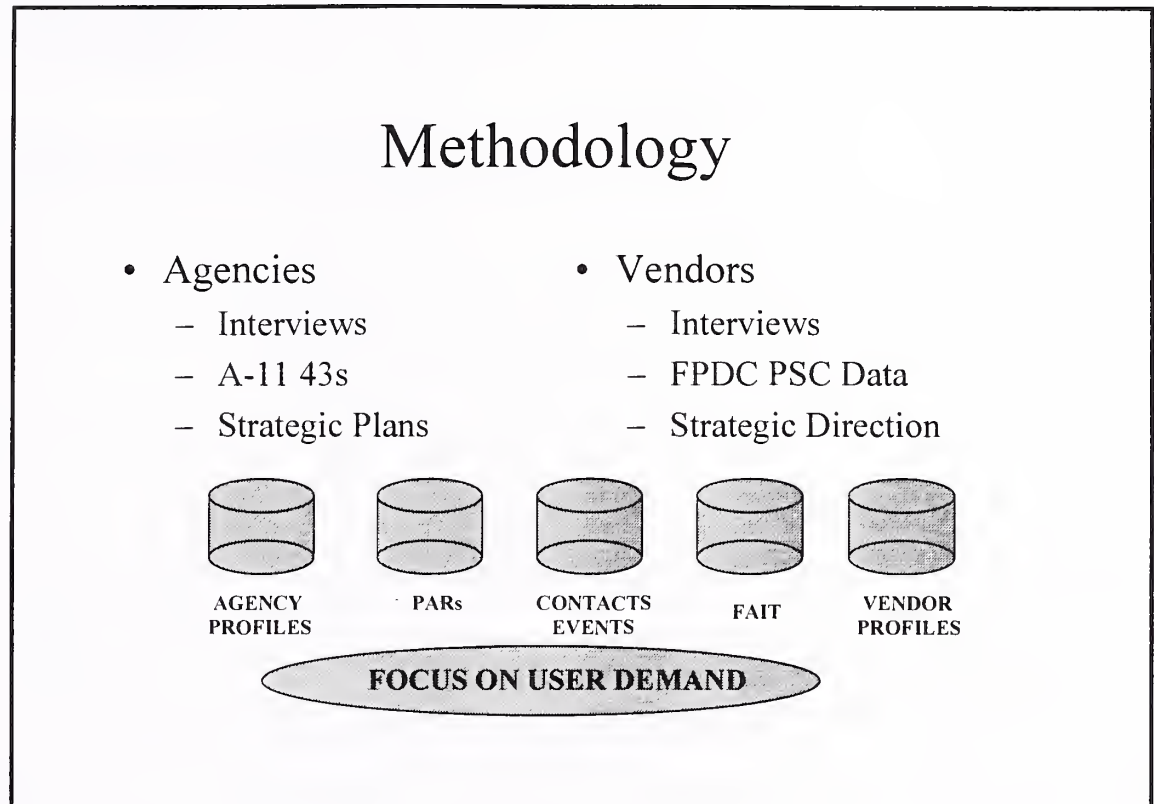
C

Report Organization

In addition to this introduction, this report has been organized as follows:

II   Executive Summary

III   Market Trends

IV   Market Forecast

V   Agency Forecast and Trends

VI   Vendor Analysis

VII   Conclusions and Recommendations

Appendixes:

A   Definitions

B   Glossary of Federal Acronyms

C   GSA Schedule Service Providers

D
Related INPUT Reports

Related current reports of interest to the reader are as follows:

Federal Reports

❏ Federal Information Systems and Services Market, 1996–2001

❏ Financial Management Systems Market, 1996–2001

❏ Federal Telecommunications Market, 1996–2001

❏ Federal Imaging Market — 1996

❏ Federal IT Procurement Program, Procurement Analysis Reports

❏ Federal Document Management Market — 1995

❏ Federal Computer Security Market, 1995–2000

❏ Federal Wireless Technology Market, 1995–2000

❏ Federal Electronic Commerce/EDI Market

❏ Client/Server Trends in the Federal Market — 1994

❏ Business Process Re-engineering in the Federal Government

❏ Federal E-Mail Market — 1994

❏ Federal High-Performance Computing, 1994–1999

❏ Geographical Distribution of Federal IT Spending.

Commercial Reports

❏ Customer Satisfaction with Systems Integration Vendors

❏ Impact of the Internet on Systems Integration and Professional Services Markets

❏ Pricing and Marketing of Professional Services

❏ Strategies for Successful Alliances

❏ Opportunities for Outsourcing Supply Chain Management

❏ Impact of the Internet on Outsourcing and Processing Services

❏ Outsourcing Vendor Performance Analysis

❏ Outsourcing Services Competitive Analysis

II
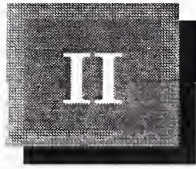
Executive Summary

A

Market Trends

Many factors operate concurrently to influence the federal professional services market and the IT market overall. There is no single factor that acts alone in influencing budget and spending levels. This report identifies and discusses the major factors influencing the professional services market today and over the next five years. These factors include, but are not limited to, the following:

❏ Attempts to reduce the federal deficit

❏ Targeted increases in IT spending

❏ Influences toward the use of commercial services

❏ Pressures to downsize the federal workforce

❏ Acquisition and IT management reforms

Because the professional services market is closely tied to and driven by the overall information technology market, an overview of the federal market is provided below.

The proposed FY 1997 federal Executive branch information technology budget of $27.3 billion is up slightly from $26.7 billion in the proposed budget for FY 1996. The traditional way of conceptualizing functional categories in the IT budget changed in fiscal year 1996 reporting. The seven categories shown in Exhibit II-1 represent current distributed modes identified by the Office of Management and Budget (OMB). For FY 1997, equipment is down 3% from FY 1996, while services went up 3% from FY 1996. The relative distribution of all other categories stayed the same.

Exhibit II-1

Information Technology Budget Categories, FY 1997

Pie chart labels:
- Other 1%
- Equipment 19%
- Personnel 23%
- Software 5%
- Services 16%
- Supplies 2%
- Support 34%

Obligations - $27.3 Billion
Contracts - $20.9 Billion
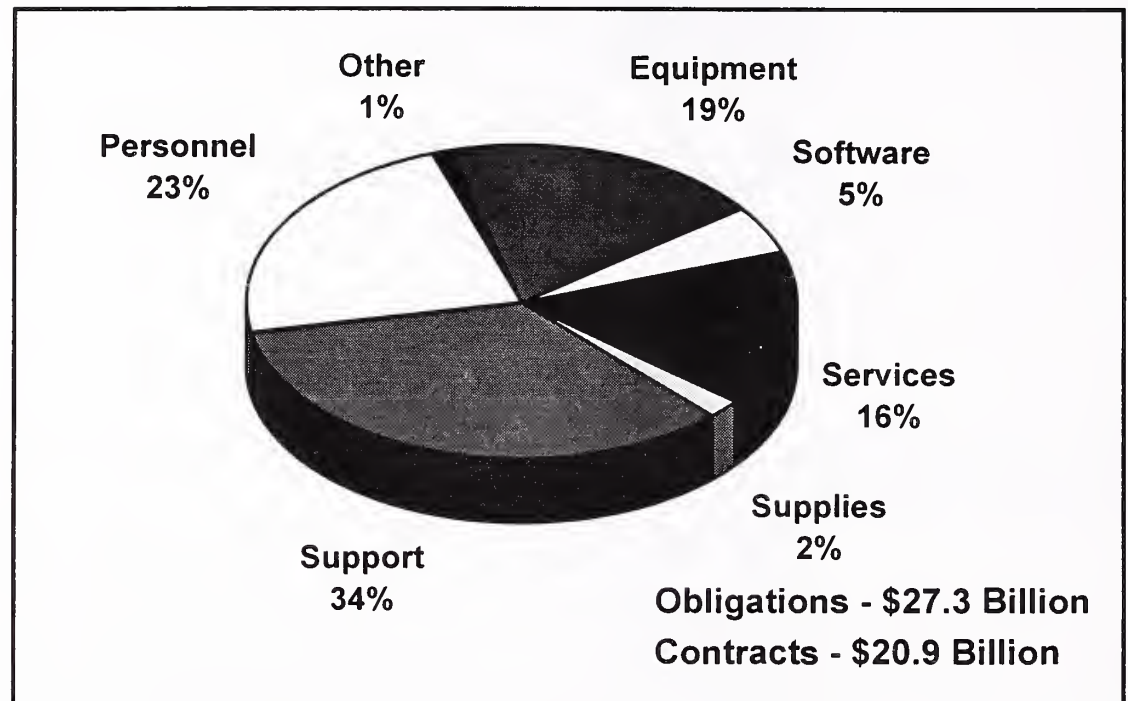
Source: INPUT

This represents a strong signal that the federal government will be contracting out more and more of its IT systems and services requirements. (See Exhibit II-2.) The addressable portion of the IT budget is estimated to increase from $20.3 billion in FY 1996 to $20.9 billion in FY 1997, excluding classified systems and imbedded technologies. Contracting continues to increase over the long term, from 77% of the FY 1994 federal IT budget to 84% in FY 2001 — representing a 5% compound annual growth rate (CAGR). The Department of Defense (DoD) contracts approximately 70% of its total IT resources, while civilian agencies contract out for around 80% of total IT dollars.

Key driving forces to increased contracting opportunities include:

❑   Agency downsizing

❑   Outsourcing of people

❑   Inability to maintain technical expertise in-house

Exhibit II-2

Information Technology Contracting Trends, FY 1986–FY 2001
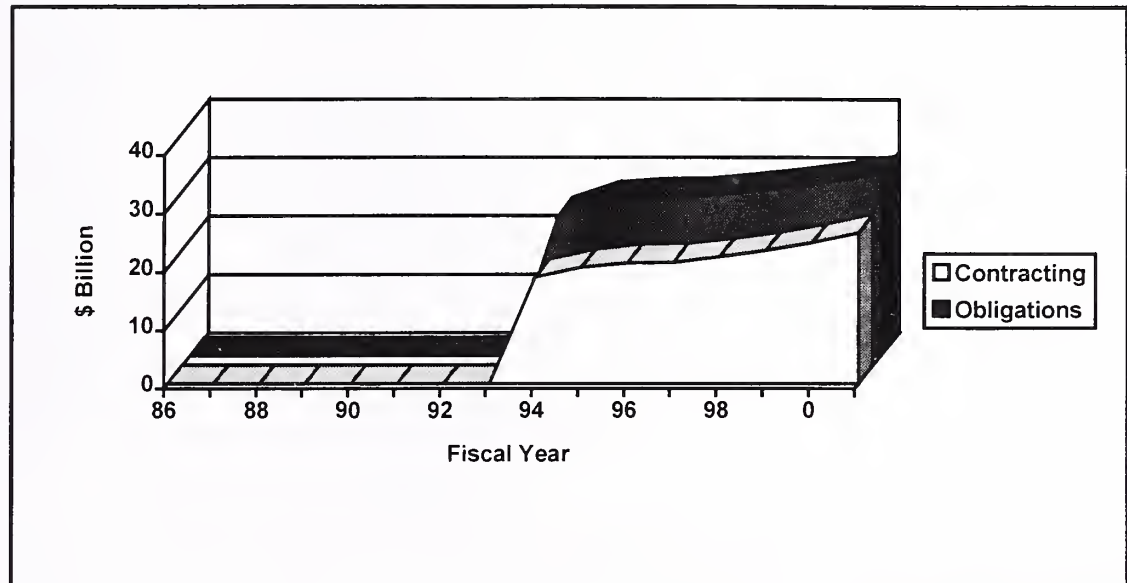
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Market Forecast

The federal market for professional services is expected to sustain a CAGR of 6% from FY 1996 to FY 2001, growing from $5.5 billion to $7.5 billion, respectively. Government end-users will continue to be faced with declining personnel levels, tightened federal funding and the need to increase the efficiency of information resources over the next several years, all of which will drive the growth rate of the professional services market above the projected growth of the total IT market.

While the anticipated growth factor in the professional services market from FY 1996 to FY 1997 is a moderate 2%, this figure is expected to recapture the average 8% annual growth of prior years from FY 1997 to FY 1998 and from FY 1998 to FY 1999. The current low growth factor is largely attributable to the historical low agency projections for IT resources in OMB's Circular A-11 Exhibit 43.

The current and projected need for contractor assistance makes the federal government the largest user group for professional services in the U.S. Exhibit II-3 highlights the total federal market for professional services in FY 1996 and its projected growth to FY 2001.

Exhibit II-3

Total Professional Services Market, FY 1996–FY 2001
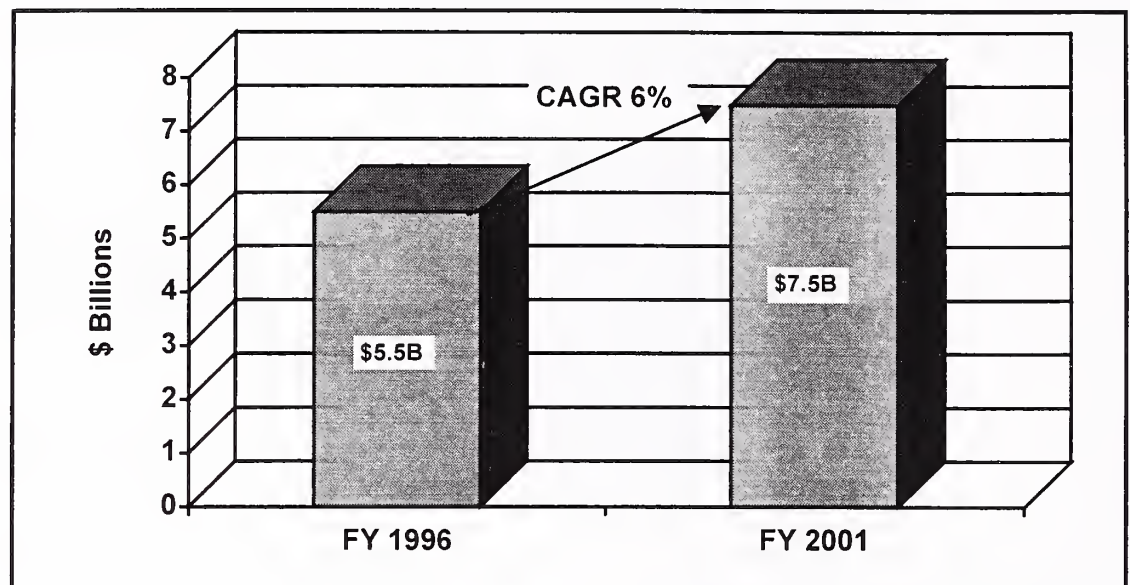
CAGR 6%

$7.5B

$5.5B

$ Billions

FY 1996   FY 2001

At $3.9 billion, civilian agencies accounted for 71% of the total professional services market in FY 1996, with DoD accounting for the remaining 29%. While DoD agencies continue to rely heavily on all service modes, their ongoing downsizing and reorganization efforts will undoubtedly have a stagnating effect on the ability to fund vendor services requirements. Based on projected growth rates, civilian agencies are expected to command approximately 75%, or $5.8 billion, of the total professional services market in FY 2001 — a growing share of a growing market.

The professional services market is commonly conceptualized as three basic delivery modes — software development, design and consulting, as well as education and training. However, this report also analyzes professional services as they pertain to systems integration and outsourcing requirements within the federal government. For the sake of clarity, software development, design and consulting and education and training are referred to as "basic" professional services to differentiate them from systems integration and outsourcing services.

As shown in Exhibit II-4, the basic services submarket represents the largest segment of the total market. Its growth is all the more impressive given that it starts with the largest numbers. Last year's CAGR forecast of 6% has now been adjusted to 7% to reflect renewed spending in obligations, particularly for developmental systems. The systems integration component continues to grow at healthy levels and systems operations show moderate growth, and that growth is primarily driven by operations of government-owned facilities.

Exhibit II-4

Professional Services Market — All Segments, FY 1996–FY 2001
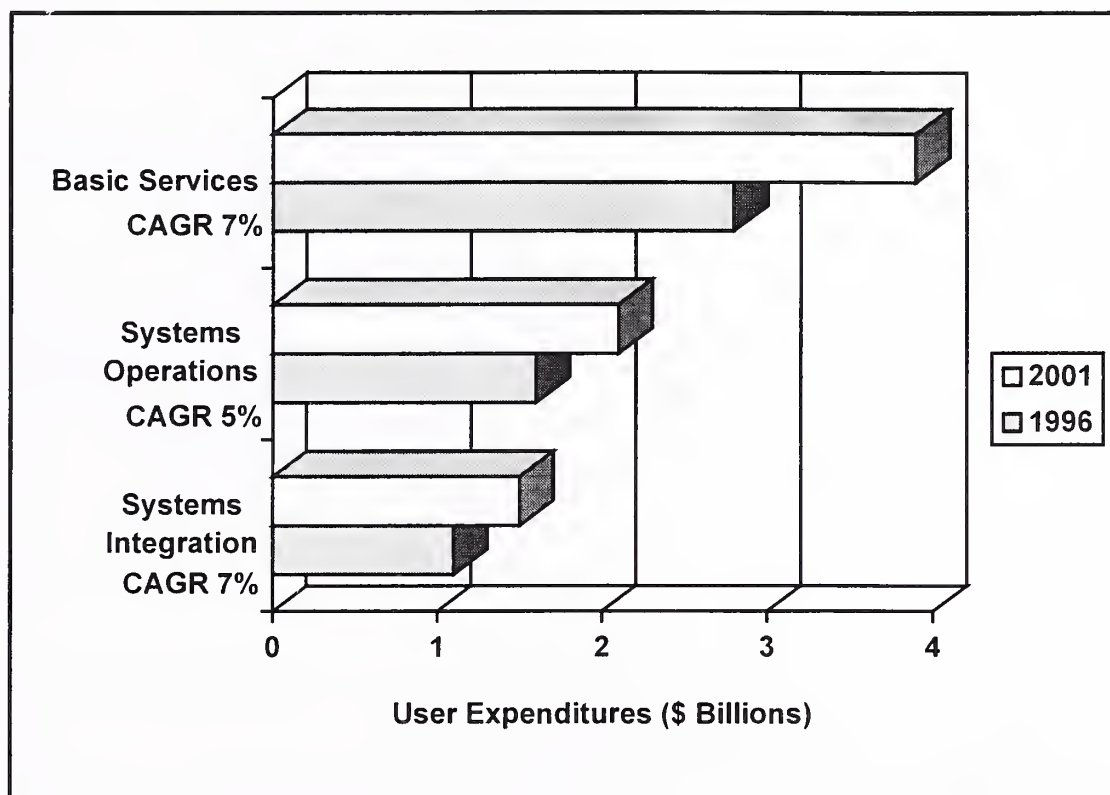
Source: INPUT

Exhibit II-5 highlights the distribution of federal expenditures by professional services market segments in fiscal year 1996. Software development represented the largest single submarket at 31% ($1.7 billion) of the total professional services market. Systems operations and outsourcing, including both government- and contractor-owned sites, captured the second largest portion of the market at 29% ($1.6 billion). Collectively, basic professional services represented approximately 51% of the total market in FY 1996. These market shares are expected to remain relatively constant for the next five years.

The remainder of the market forecast report offers a more detailed look at the trends and forces in each of these distributed modes of professional services.

Exhibit II-5

Professional Services Market Segment Distribution, FY 1996
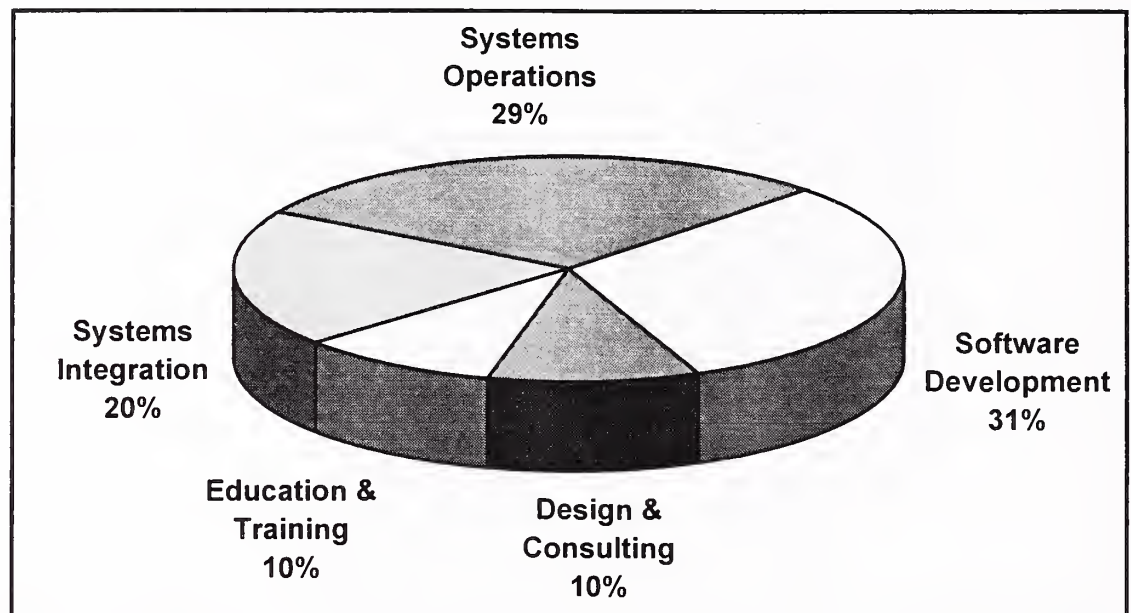
Source: INPUT

C

Agency Forecast and Trends

INPUT forecasts information technology budgets by agency based on spending in obligations as reported to the Office of Management and Budget. However, the current Circular A-11 Exhibit 43 does not require agencies to report detailed spending on professional services. Only "support services" are reported, which is defined by OMB as any commercial service, including maintenance, used in the support of equipment, software or processing and telecommunications services.

To estimate current and potential future agency spending by specific professional services delivery modes, INPUT analyzes historical spending patterns by agency and considers existing and projected market trends that may affect spending on professional services. Based on these analyses, comprehensive budget forecasts and program trends are provided below for those agencies — both civilian and Defense — with leading expenditures on total professional services and specific professional services submarkets.

Agency Overview

Agencies throughout the federal government are forced to do more with tightened program budgets. This fact, coupled with the advent of information technology management reform and rapid technological change, ensures that professional services will continue to lead overall IT funding because such services are fundamental in the proper and efficient use of other information resources.

Also of note is the portion of the total information technology budget available to agencies that is being allocated for professional services. This figure inherently varies widely within the federal government because agency functions and missions differ, ranging from as high as an estimated 51% at the Department of Education to as low as 6% at the Department of State in FY 1996. Exhibit II-6 highlights the relative reliance on professional services among the 10 leading users of such services.

Exhibit II-6

Professional Services Share of Total IT Budget by Agency, FY 1996
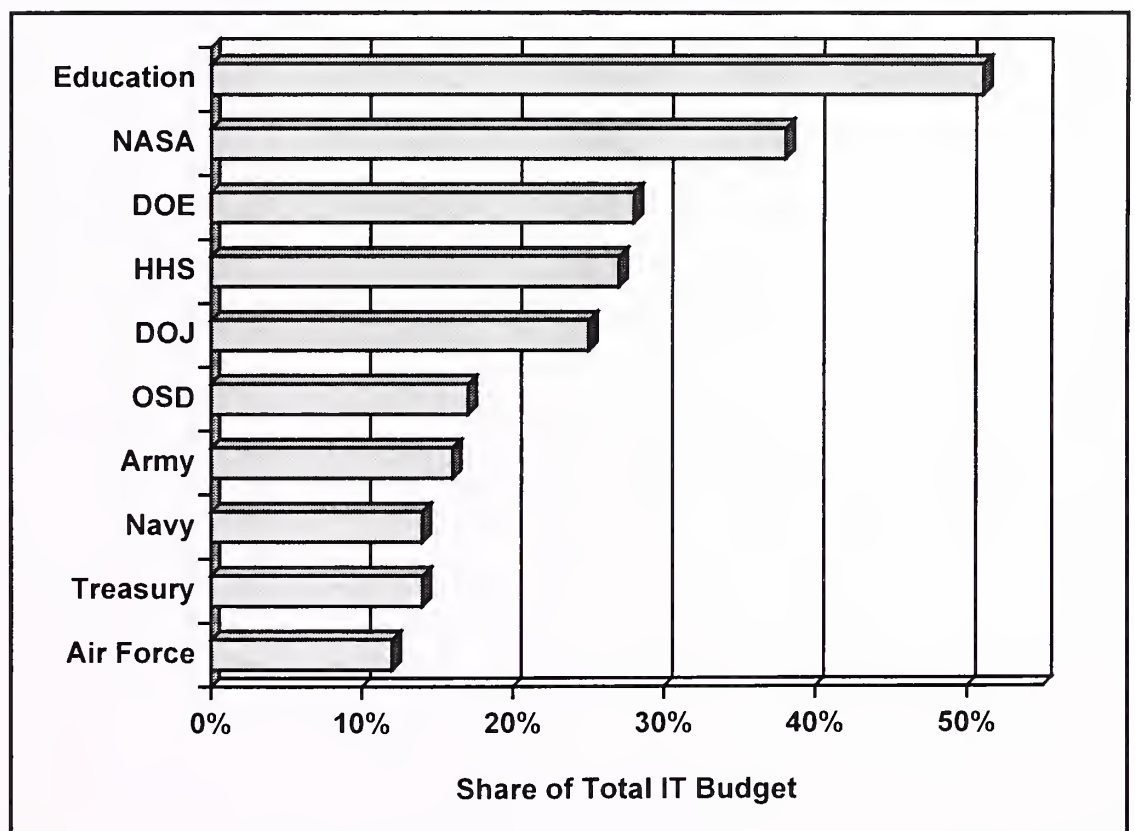
Source: INPUT

Based on INPUT's analyses of agency budget submissions to OMB and historical spending trends, Exhibit II-7 identifies the 20 leading agencies for professional services expenditures in fiscal year 1996. GSA deserves special attention in this agency ranking because it allocated an actual $2.3 billion to commercial support services in fiscal year 1996 — more than any other federal agency. While the Administration could be treated as the leading services agency, INPUT found that 97% of these commercial services expenditures have historically gone to the Federal Telecommunications Service (FTS) within GSA on an agency cost-reimbursement basis. As noted earlier, communications and telecommunications services are omitted from the data presented here.

While GSA ranks 19th among the top 20 agencies for professional services correcting for FTS, the agency has a number of significant contracts in place that should not be overlooked. For example, the agency awarded the $6.0 billion FEDSIM's Data Center Services (FEDCAC 111) program to CSC, SunGard and Unisys on February 19, 1997 for government-wide professional services. Even with the demise of GSA's central authority over IT procurement under the Clinger-Cohen Act of 1996, expect the agency to continue to serve as a central facilitator of professional services via government-wide contracts and related programs.

The agencies discussed in greater detail in the report represent the top 10 end-users of professional services in the government — a significant representation of the total federal market. The resources allocated for contractor services by these 10 agencies comprise approximately 75% of the total federal market for professional services. The following agency forecasts are presented in decreasing order of estimated total services expenditures:

- Office of the Secretary of Defense
- National Aeronautics and Space Administration
- Department of Energy
- Department of Health and Human Services
- Department of the Navy
- Department of Justice
- Department of the Army
- Department of the Air Force
- Department of the Treasury
- Department of Education

Exhibit II-7

Total Professional Services Spending by Agency, FY 1996
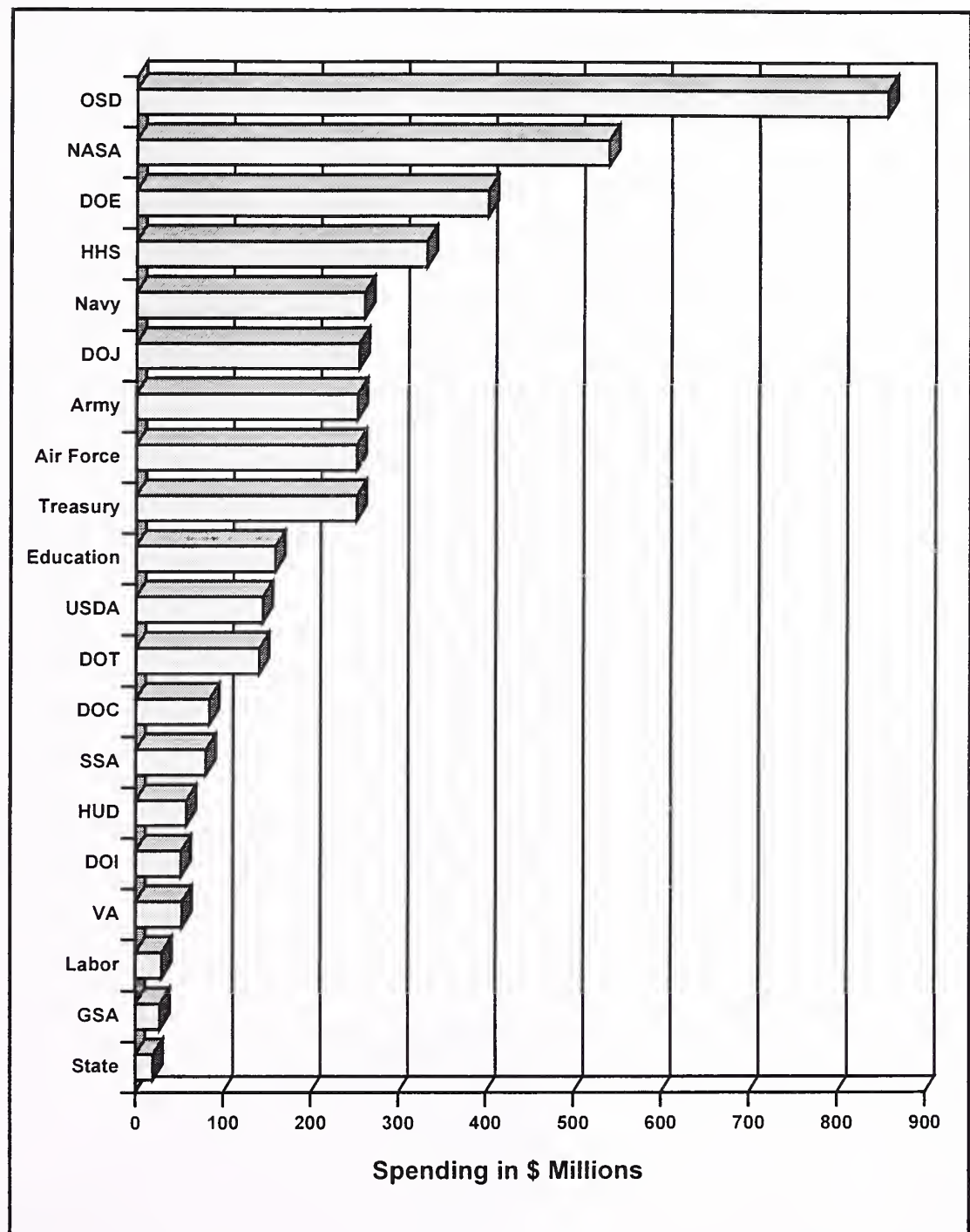
Source: INPUT

Agency Market Segments

Agency spending trends by professional services submarkets are explored and forecasted. The three professional services market tiers — basic professional services, systems integration and systems operations/ outsourcing — are further broken down to offer an in-depth look at how leading agencies will allocate contract dollars on professional services.

Basic professional services market segments are conceptualized as three key delivery modes: design and consulting services, software development and education and training. While systems integration encompasses a host of submarkets, such as hardware systems and software products, systems integration professional services is defined here as a separate market segment. Systems operations and outsourcing are further broken down into contractor-owned, contractor-operated (COCO) and government-owned, contractor-operated (GOCO) submarkets.

Historical and projected spending trends of these market segments reveal that five agencies — OSD, NASA, DOE, HHS and the Navy — command the greatest market share in each. These five agencies also represented the leading overall users of contractor services in fiscal year 1996 and taken together, they comprised almost half of the total federal market for professional services, as highlighted in Exhibit II-8.

Exhibit II-8

Professional Services Market Share by Agency, FY 1996

All Others
57%

Navy
5%

HHS
6%

DOE
7%

NASA
10%

OSD
16%

Total Professional Services
Market = $5.5 Billion
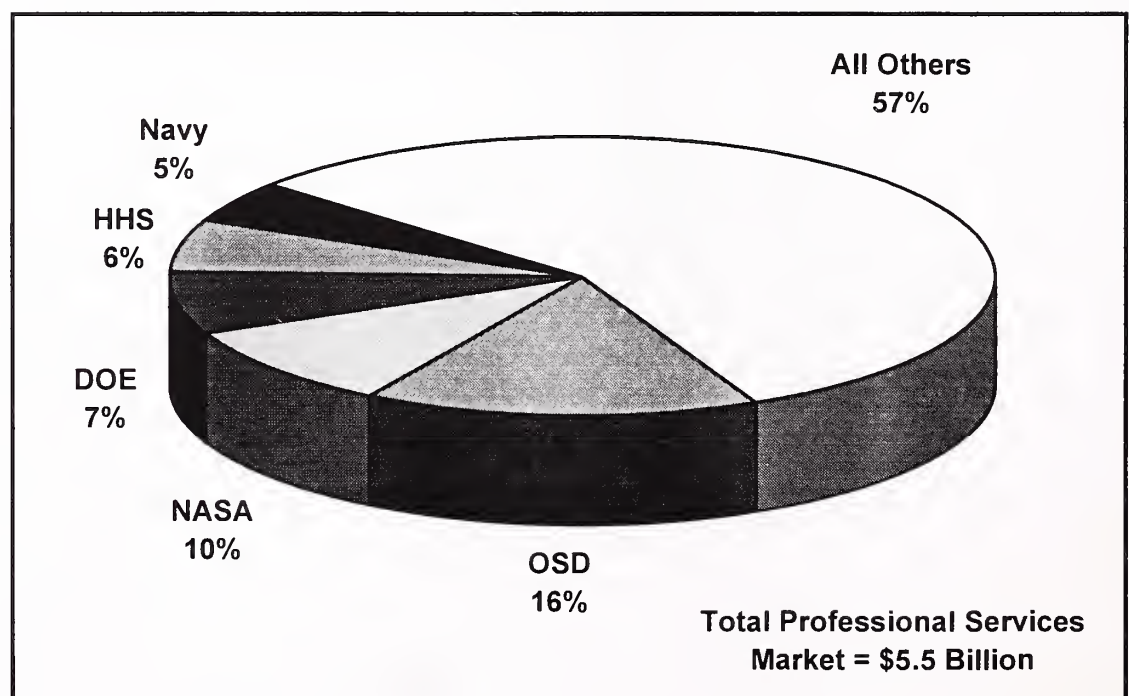
D

Vendor Analysis

INPUT provides an overview of the competitive arena in the federal professional services market, as well as a more in-depth analysis of the leading players among professional services contractors.

To develop a picture of the major players in the federal professional services market, INPUT examined net obligations compiled by GSA's Federal Procurement Data Center (FPDC) for specified reporting periods. INPUT has found them to be useful for determining market share, as well as for vendor and agency rankings for certain market segments.

Exhibit II-9 shows the top 10 vendors in terms of total professional services obligations reported during fiscal year 1996, the latest period such data were compiled by GSA. Obligations reported during fiscal years 1994 and 1995 were also analyzed to emphasize any changes in the composition of leading professional.services vendors, as discussed in greater detail below.

Exhibit II-9

Top Ten Professional Services Vendors, FY 1996

Rank	Company	Obligations ($K)	Market Share
1	Lockheed Martin Corporation	$933,527	17%
2	Raytheon Company (E-Systems)	537,323	10%
3	Computer Sciences Corporation	398,640	7%
4	Science Applications International Corp.	333,257	6%
5	Logicon, Inc.	279,654	5%
6	The Boeing Company	258,658	5%
7	TRW, Inc.	222,000	4%
8	McDonnell Douglas Corporation	213,419	4%
9	BDM International, Inc.	170,757	3%
10	Rockwell International Corporation	146,605	3%
	Top Ten	3,493,840	**63%**
	Total Professional Services Market	**5,512,154**	**100%**

Note: Rounding may cause subtotal discrepancies.   *Sources: INPUT and FPDC*

The leading professional services vendors are well positioned in the top 10 agencies requiring such services during FY 1996, as shown in Exhibit II-10. Checks (✓) represent the presence of significant (at least $5 million) currently-active contracts that require primarily professional services at the given agencies. Contracts held by the leading vendors that primarily satisfy requirements for other information technology products and services are omitted from the data.

Exhibit II-10

Existing Professional Services Contracts by Vendor and Agency

Leading Vendors	Leading Agencies									
	OSD	NASA	DOE	HHS	Navy	DOJ	Army	USAF	Treas.	Educ.
Lockheed	✓	✓			✓	✓	✓	✓	✓	✓
Raytheon	✓				✓		✓	✓		✓
CSC	✓	✓	✓	✓	✓		✓	✓	✓	✓
SAIC	✓	✓	✓	✓	✓	✓	✓	✓		
Logicon	✓			✓	✓	✓	✓	✓		
Boeing	✓	✓		✓	✓		✓	✓		
TRW	✓	✓		✓	✓	✓	✓	✓	✓	
McDonnell		✓		✓	✓			✓		
BDM	✓		✓	✓		✓	✓	✓		
Rockwell		✓					✓	✓		

Source: INPUT

In Chapter VI of this report, a more detailed analysis is given of the leading professional services vendors to the federal government. Provided are a corporate overview, a summary of the companies' major professional services contracts currently in place, a breakdown of the vendors' leading end-users for professional services, as well as a breakdown of the types of services provided to the federal government by product/service code.

E

Conclusions and Recommendations

The federal professional services market is entering a period of dynamic evolution. This market is subject not only to all of the forces affecting the overall information technology market, but also to the new industry structure being created by the acquisition reforms of 1996. Constant awareness of regulatory changes and commercial developments will be the key to success in the federal professional services market during the next five years.

General Observation

The Year 2000 problem is the major issue and at the same time the major opportunity facing federal professional services vendors. With the cost of correcting this problem ranging anywhere from $2.3 billion to $30 billion, it is the wild card in the deck.

In its report, entitled *Getting Federal Computers Ready for 2000*, the Office of Management and Budget reported agency estimates of $2.3 billion to fix this problem. OMB now asserts that this was a preliminary estimate and that more accurate estimates will become available after agencies complete the assessment phase.

With industry estimates ranging from $5.6 billion to as high as $30 billion, it is difficult to determine the real impact this issue will have on the professional services market. To be sure, those vendors who have positioned themselves to compete for this business by being on a GSA schedule as a Y2000 provider have a significant competitive advantage for the next three to four years. More information on this major issue and its potential impact on the federal professional services market is provided in OMB's report.

Agency Perceptions

In this report INPUT looks at the agency perceptions of the advantages and disadvantages of vendor provided professional services along with vendor characteristics including vendor type, vendor qualifications, and vendor performance. In addition, INPUT reports on the agency suggestions on what vendors could do to make their services more valuable.

The following discussion and exhibits highlight findings from this study on the agency perceptions of the advantages and disadvantages of outsourcing professional services.

Federal agencies, both civilian and Defense, use professional services because they perceive vendor capability in offering experience and expertise that are not always extensively available within the agency. Professional services are also used because they give the agency the ability to balance workloads without increasing or decreasing government staff as requirements are added or removed. Furthermore, contract labor may be less expensive than government employee labor in performing the same task, and fixed-price contracting enables the government to place a ceiling on overall cost. The latter is particularly seen as advantageous by Defense agencies.

Exhibit II-11 highlights some of the basic advantages and benefits of professional services, which commonly hold true for civilian and Defense agencies

Exhibit II-11

Advantages/Benefits of Professional Services

❑   Expertise and Staff Skills

❑   Balanced Work Load

❑   Cost Effectiveness/Cost Saving

❑   Expedience

❑   Objectivity

❑   Staff Flexibility

❑   Advanced Technology

❑   Staff Experience

Source: INPUT

While many advantages and benefits are cited for contracting out professional services to vendors, agencies perceive disadvantages as well. Such disadvantages can largely be categorized as liability with the federal government.

Exhibit II-12 provides an overview of key disadvantages of contracting for professional services as perceived by federal agencies. Though numerous, liabilities associated with professional services are generally outweighed by advantages — hence the growing federal market for such services.

Exhibit II-12

Disadvantages/Liabilities of Professional Services

❏ Contract Management

❏ Procurement Process

❏ Contractor Learning Curve

❏ Performance Risk

❏ Cost Growth

❏ Contractor Dependence

❏ Loss of Staff Experience

Source: INPUT

Recommendations

The federal professional services market is in a state of change because of the federal acquisition reforms of 1996. This state of flux has created a degree of uncertainty which makes clear predictions and forecasts of the market and its future composition difficult at best. One of the few things that can be asserted with confidence is that this market will change significantly over the next five years, but will enjoy consistent growth. The following recommendations will help vendors maintain their competitive edge to take them into the twenty-first century:

❏ Prepare for more competition

❏ Increase marketing activities to develop strong agency relations, particularly with GSA

❏ Be alert for "blink and miss" opportunities

❏ Understand agency requirements and acquisition reforms

❏ Emphasize cost-effective solutions

❏ Emphasize cost benefit analysis

❏ Provide adaptive COTS products

❏ Get on a GSA schedule

❏ Service emerging technologies

❏ Broaden market focus

❏ Engage CIOs and other agency decision-makers

II-15

This federal professional services market is clearly a very healthy segment of the total federal information technology market. The market is enjoying the force of federal downsizing as a driving factor and will continue to do so over the next five years. A few factors exist that are inhibiting market growth, but, with targeted marketing effort, they can be either compensated for or eliminated. As a result, the current federal professional services market presents excellent opportunities for all services vendors, and should be a very profitable area of IT business development.

III
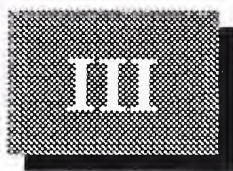
Market Trends

Many factors operate concurrently to influence the federal professional services market and the IT market overall. There is no single factor that acts alone in influencing budget and spending levels. This chapter identifies and discusses the major factors influencing the professional services market today and over the next five years. These factors include, but are not limited to, the following:

❑   Attempts to reduce the federal deficit

❑   Targeted increases in IT spending

❑   Influences toward the use of commercial services

❑   Pressures to downsize the federal workforce

❑   Acquisition and IT management reforms

Because the professional services market is closely tied to and driven by the overall information technology market, an overview of the federal market is provided below.

A
Federal Market Overview

1.   Economic Factors

The nation continues to address a number of highly visible and sensitive operational issues. Both the Administration and Congress have proposed budget resolutions that would balance the federal budget within the next seven years. With limited success, the market can expect to see either smaller scopes in existing programs or termination of some programs to decrease overall government spending. Whether these scenarios will limit spending on information technology products and services remains to be seen. However, the likelihood at this time of significantly reduced budgets for IT spending is very low.

The final report of the National Performance Review (NPR), released to the public September 7, 1993, posed a number of new directions for federal agencies. From the perspective of federal information technology services vendors, the two most significant were procurement reform and the "re-invention" of government through more effective use of IT. The NPR report mandates improved service at lower cost. Improved service is coupled with the requirement of related federal programs to "inter-operate." Business process re-engineering, client/server architecture and acquisition of commercial services all have been identified as enablers of improved performance at lower cost. The public awareness of the NPR has diminished during the past year, but initiatives will continue at least through FY 1997 and likely well into the next Administration, if it is a Democratic one.

The Federal Acquisition Reform Act of 1996 and the Information Technology Management Reform Act of 1996, collectively known as the Clinger-Cohen Act of 1996, have set the tone for major changes in federal IT contracting. This legislation makes the procurement process more streamlined and more like commercial-processes — further encouraging the use of commercial services and products.

Structural adjustments continue in national programs as a result of slow economic recovery. Massive layoffs of workers in the industrial complex, further downsizing of the Defense program and closings of military bases, as well as spiraling costs of entitlement programs are among the issues driving the adjustments. Redistribution of federal tax dollars through proposed increases in block grants will further redefine the professional services industry in particular.

a.   FY 1997 Federal Budget

Reported actual spending for FY 1996 was slightly higher than estimated last year. Estimated spending for FY 1997 is on par with FY 1995 spending levels, and forecasted spending for FY 1998 is up 5% over current spending levels. Actual spending, however, has been on a decline since FY 1992. Forecast levels for FY 1998 through FY 2002 anticipate spending increases at modest levels. The FY 1997 budget process was marked with concerns for spending reductions and improved government services. The process for FY 1998 will be marked with difficult decisions on the closing of several federal agencies, the merging of more than 270 agency programs that have similar missions and the closing down of as many as 130 outdated federal programs.

The budget and the economy operate together, each influencing the other as changes occur. A slackening in economic growth tends to increase the size of the deficit. Increasing unemployment rates influence lower GDP growth. This lessening, in turn, increases federal outlays for entitlement programs such as food stamps and unemployment compensation. The significant factors affecting the spending are the deposit insurance payments and

increases in the recession-driven benefits programs. The White House estimates that the deficit will continue to fall as a percentage of GDP to 2%, its lowest level since 1979. Federal spending as a ratio to GDP has fallen from 25% to 23% from FY 1996 to FY 1997, a trend which will likely continue as federal expenditures reach levels similar to those in the late 1970s.

b. Reinventing Government

As a result of the President's National Performance Review Initiative, five major themes evolved to improve the government's overall performance at lower operating costs. One theme — restructuring — led to the issuance of proposals to overhaul and reorganize five agencies. Through reinvention, the agencies listed in Exhibit III-1 are expected to reduce the deficit more than $22 billion by the year 2000. NPR's mandate for improved services at lower costs is already taking shape in civilian agencies as outsourcing efforts mount. Similarly, the Defense Science Board continues to pressure all DoD agencies to outsource more support services, including operations at Defense Department data processing and professional services "megacenters." Such efforts will continue to affect the professional services market, both as catalysts and depressants of growth, as is described in more detail in the sections that follow. It is likely that the short-term net effect of restructuring the government will be positive, because greater levels of consulting, education and integration professional services are required for reorganization efforts. In the long term, however, a more streamlined government may be less dependent on IT overall to accomplish its tasks.

Exhibit III-1

Expected Savings From Five Reinvented Agencies

Agency	Expected Savings ($ Millions)
Housing and Urban Development	700
Energy	14,121
Transportation	6,435
General Services Administration	1,400
Office of Personnel Management	30

Source: Budget of the United States Government, Fiscal Year 1996

2. Information Technology Budgets and Trends

In addition to the economic factors that affect the overall federal IT market, information technology budgets and their changes over time naturally have a direct impact on the requirements and available money for professional services spending. This section looks at IT expenditures and the major trends within the overall IT budget to offer insight into the market forecast for professional services.

a. Total IT Expenditures

FY 1995 saw the largest differential in total federal IT expenditures, a $1.9 billion increase (of which $1.7 billion was in Defense), between projected expenditures and actual outlays. The previous record increase was $1.0 billion. Exhibit III-2 highlights trends in growth rates of total and contracted information technology expenditures. A key trend is the relative increase of that portion of the total IT budget which is addressable to contractors.

Exhibit III-2

Total Federal IT Expenditures, FY 1991 – FY 2001
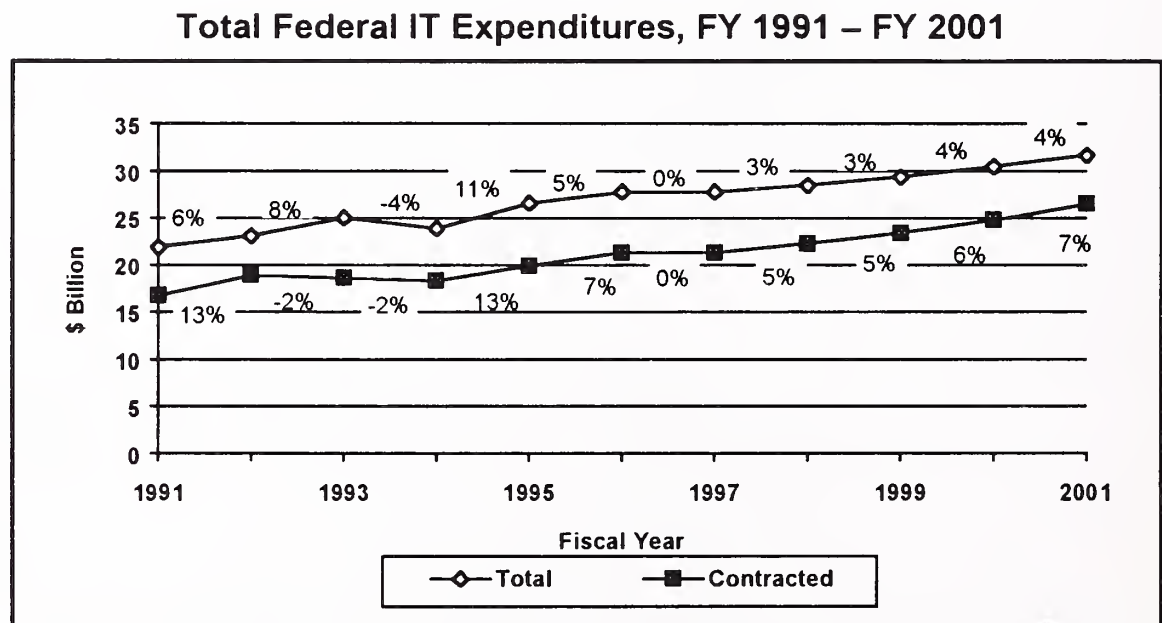
Sources: OMB, INPUT

FY 1996 witnessed another healthy increase of 5% on total federal IT expenditures and 7% on the contracted portion. The outyears see total expenditures increasing 3% going to 4% around the turn of the century. The effects of federal workforce downsizing will see a faster increase in the contracting portion of 5% growth going to 7% at the turn of the century.

The IT budget request of $27.3 billion for FY 1997 represents no significant increase over the $27.2 billion estimated for FY 1996. The addressable portion of the FY 1997 IT budget, shown in Exhibit III-3 as $20.9 billion, also has not changed significantly from the estimate for FY 1996. This portion of the IT budget is for contracted goods and services and shows a steady federal government dependency on the private sector for support.

Exhibit III-3

Information Technology Budget by Category, FY 1997

Capital Investments 23%

Commercial Services 48%

Operating Costs 6%

Personnel 23%

Obligations - $27.3 Billion

Contracts - $20.9 Billion
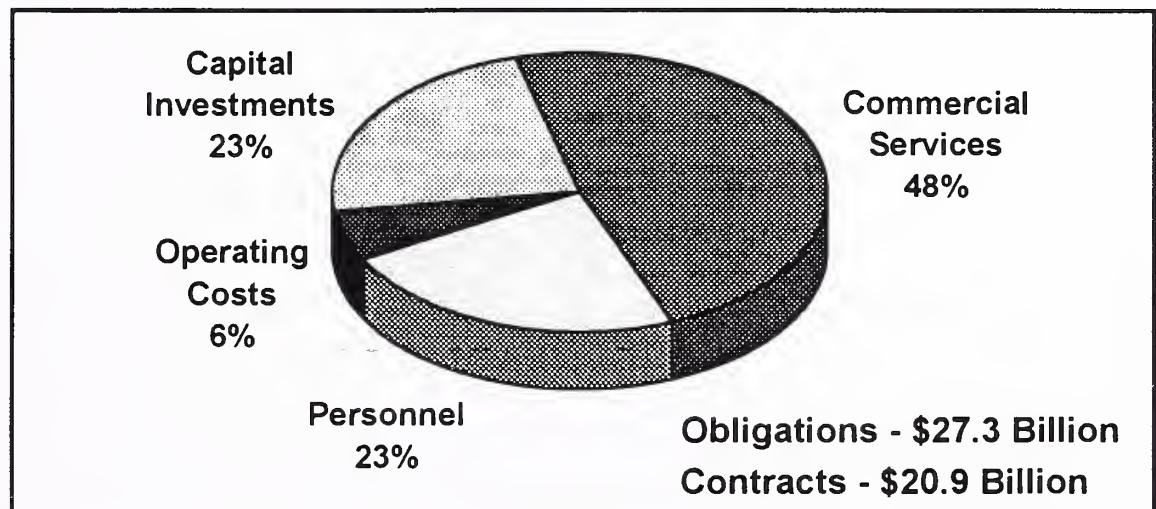
Sources: OMB, INPUT

b. IT Budget Trends

The compound annual growth rate (CAGR) from FY 1996 to FY 2001 will be 5% for commercial services, 4% for operating costs, 4% for capital investments and -4% for personnel. (See Exhibit III-4.) CAGR for total contracted IT from FY 1996 to FY 2001 will be 5%.

Exhibit III-4

Federal IT Budget Trends by Category, FY 1987–FY 2001

Legend:
- Commercial Services
- Capital Investments
- Personnel
- Operating Costs

Y-axis: $ Billion (0–18)
X-axis: Fiscal Year (87, 89, 91, 93, 95, 97, 99, 1)
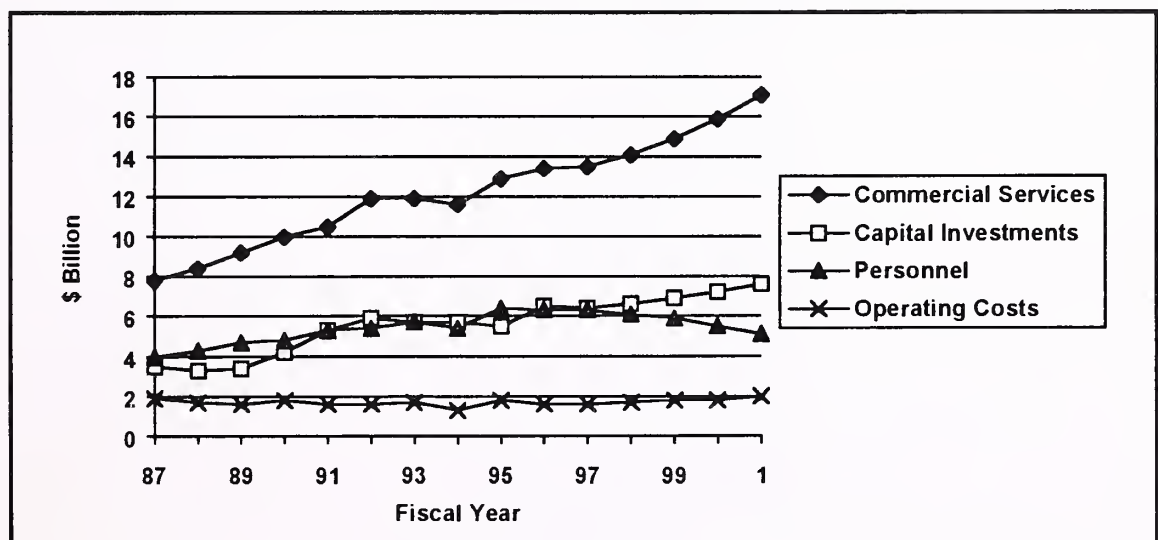
Sources: OMB, INPUT

Defense had an unexpected rise in personnel costs but is still below the civilian total. Since DoD has already made most of its personnel cuts, Defense will see a -3% CAGR from FY 1996 to FY 2001, while the civilian side will decrease at -5% CAGR. (See Exhibit III-5.) The continued strong surge in civilian outsourcing will drive the civilian personnel cost below that of Defense by FY 2001.

Exhibit III-5

Federal IT Personnel Trends, FY 1992–FY 2001
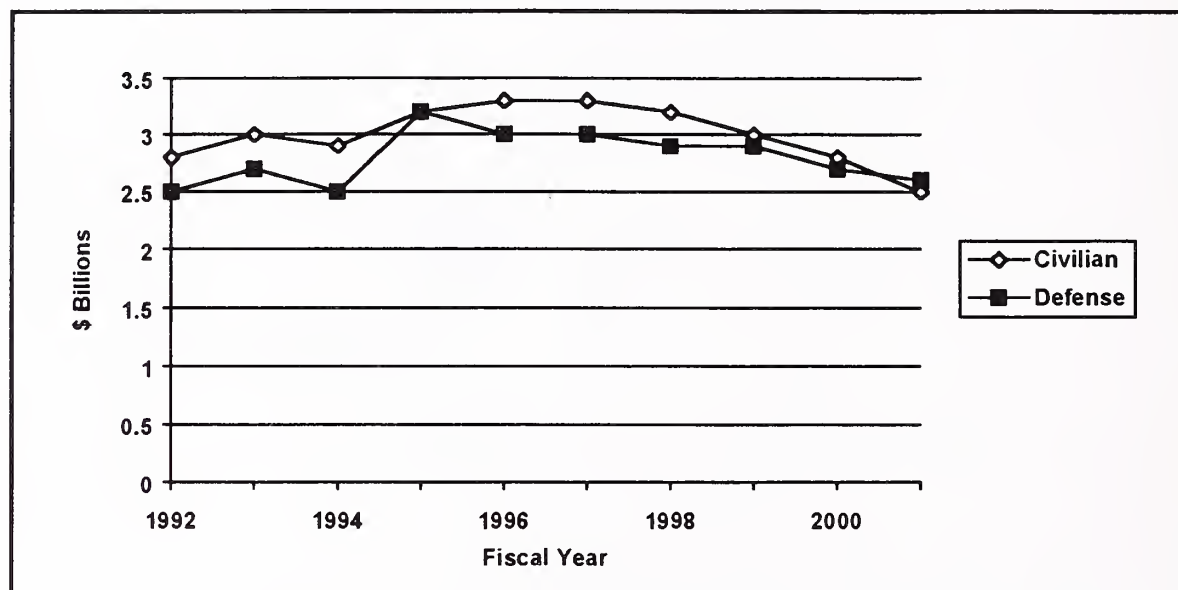
Sources: OMB, INPUT

The IT budget representation in Exhibit III-3 relates to the proposed outlays or expenditures for FY 1997, not the budget request submitted to Congress. The latter identifies additional funding needed to cover various funds transfers for services among agencies and from other projects.

The proportion of the budget spent in each of these segments has varied considerably in the past decade. In the period FYs 1987 through 1996, there have been progressive changes, as illustrated in Exhibit III-6. Professional and other commercial services spending are the only segments growing as a proportion of the total IT budget. Proportions for the other categories are on a downward progression.

Beginning in FY 1988, commercial services steadily increased about 2% per year to 52% in 1991, indicating a growing reliance on private-sector sources. Outlays fell in FY 1992 to only 48%, and held about 47% of the requested funding through FY 1994, reflecting the substantial increase in planned capital investment. The proportional growth in commercial services spending for FY 1995 returned to 50%, but the proportion declined to 47% for FY 1996 because of the unusually large growth in capital investment.

Federal personnel costs were at their lowest in 1987, when a number of older data processing suites were removed from service. Through FY 1991, agencies partially reversed the outward flow of qualified people. In FY 1992 and FY 1993, however, the proportion of the IT budget again declined, although the current dollars were actually higher. The active reduction in the federal workforce in FY 1994–1996, led by NPR which seeks a total reduction of 252,000 in federal civilian workforce and targeted staff reductions in the Department of Defense, will contribute to the further decline in in-house personnel support.

Exhibit III-6

**Federal IT Budget Progression,
FY 1988–FY 1996**
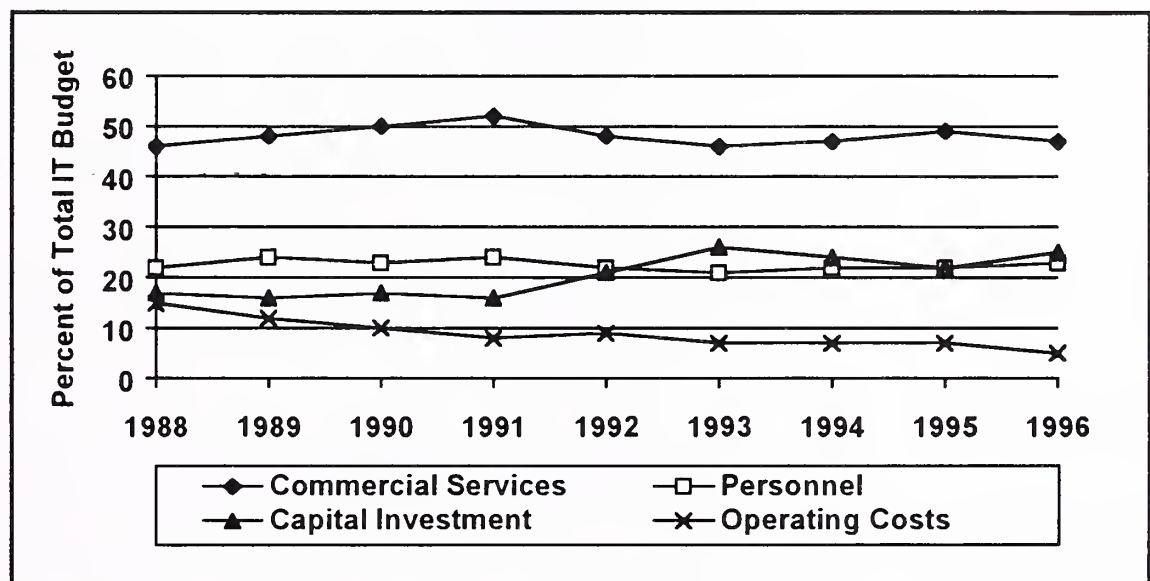
Source: OMB

As seen in Exhibit III-7, the sub-markets doing better than the federal market as a whole are:

❏ **Basic Professional Services** - software development doing well at 7% CAGR, design and consulting at 7% CAGR, education and training at 6% CAGR

❏ **Systems Operations** - Government-Owned, Contractor-Operated (GOCO) facilities management at 5% CAGR and Contractor-Owned, Contractor-Operated (COCO) facilities management at 5% CAGR

❏ **Hardware Maintenance** - growing slightly faster than overall IT at a CAGR of 5%

Comparison of Industry Trends, FY 1996–FY 2001
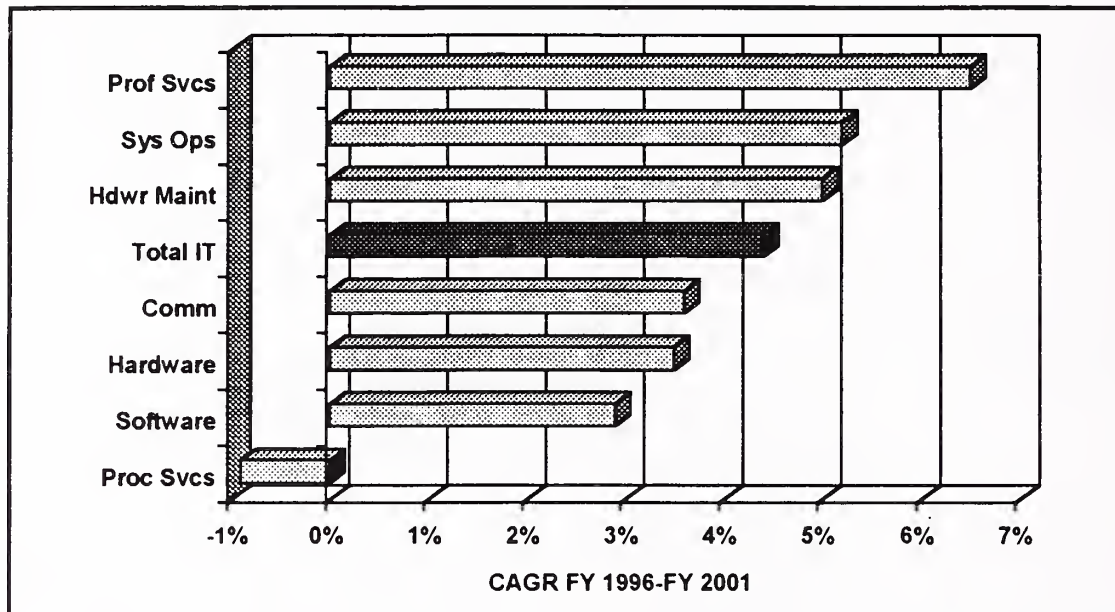
Source: INPUT

Starting in FY 1991, the Office of the Secretary of Defense (OSD) has taken the IT budget dollars for Defense. The CAGR for FYs 1996 to 2001 is 3% for OSD, 2% for Army, 2% for Navy and flat for Air Force. (See Exhibit III-8.)

Defense Agency Budget Trends, FY 1987–FY 2001
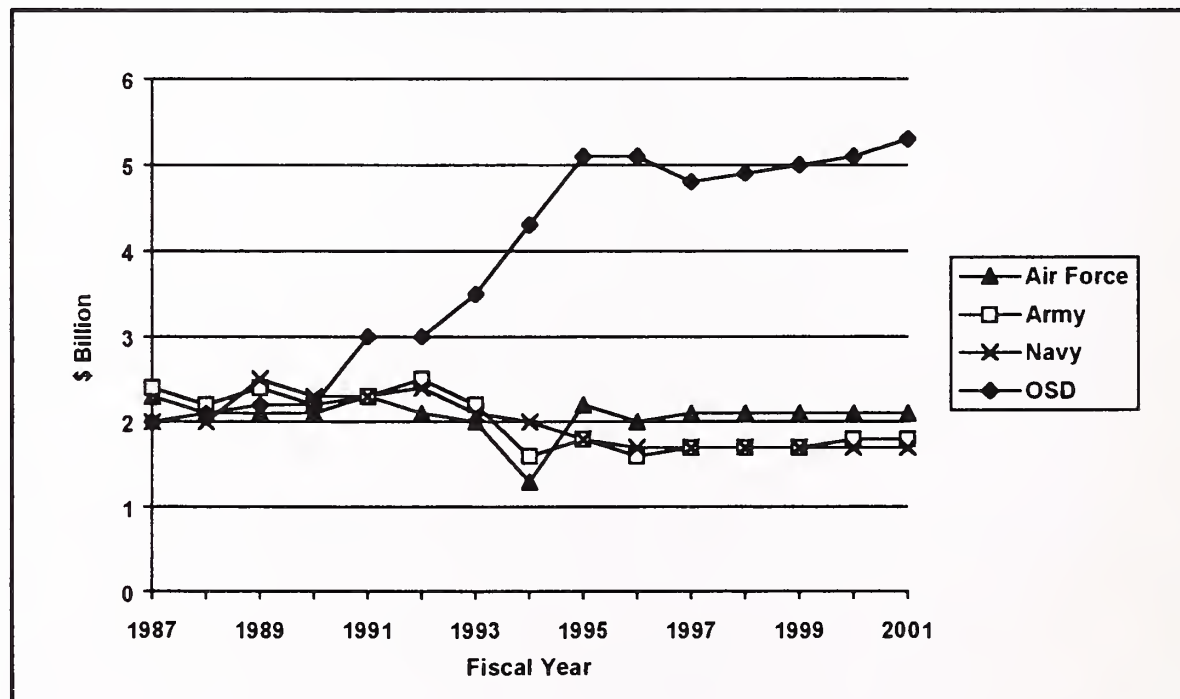
Sources: OMB, INPUT

Civilian agencies, when broken down by total IT budget, show common budget trends in each category. In the billion dollar plus category, there is no significant IT budget growth since FY 1991. (See Exhibit III-9.) Agencies with IT budgets in the $500 million to $1 billion range have a very healthy growth rate. (See Exhibit III-10.) The next group of agencies, with IT budgets in the $100 million to $500 million range, have a minimal growth rate. Education is a notable exception with exponential growth. (See Exhibit III-11.) The smallest agencies show no consistent pattern with some growing and others declining, as shown in Exhibit III-12.

Exhibit III-9

>$1 Billion Agency Budget Trends, FY 1991–FY 1997
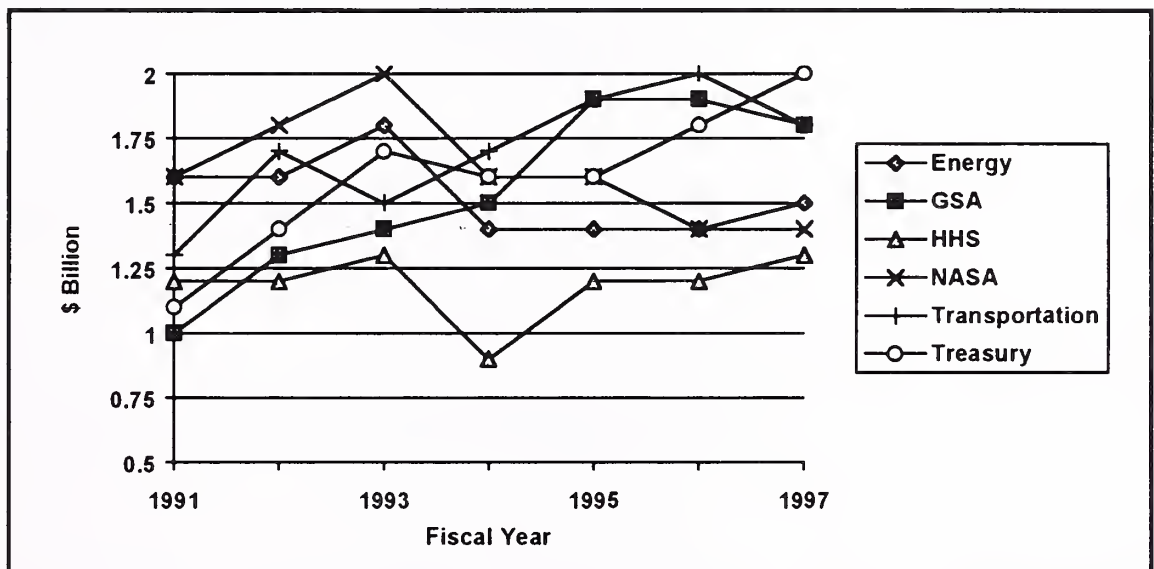
Source: OMB

Exhibit III-10

$500 Million–$1 Billion Agency Budget Trends, FY 1991–FY 1997
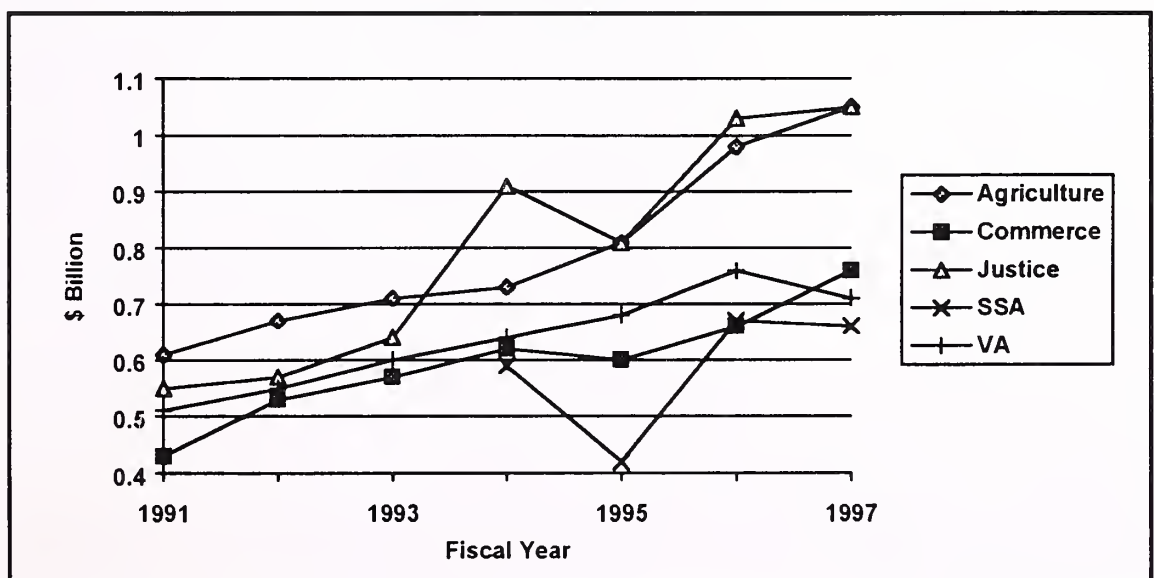
Source: OMB

Exhibit III-11

$100 Million–$500 Million Agency Budget Trends, FY 1991–FY 1997
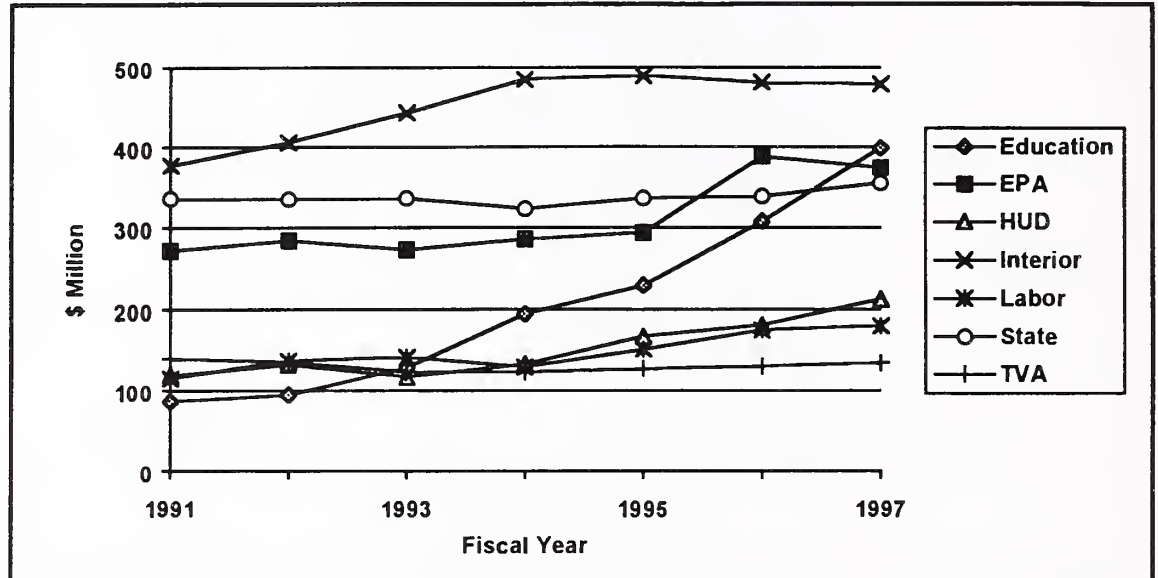
Exhibit III-12

<$100 Million Agency Budget Trends, FY 1991–FY 1997
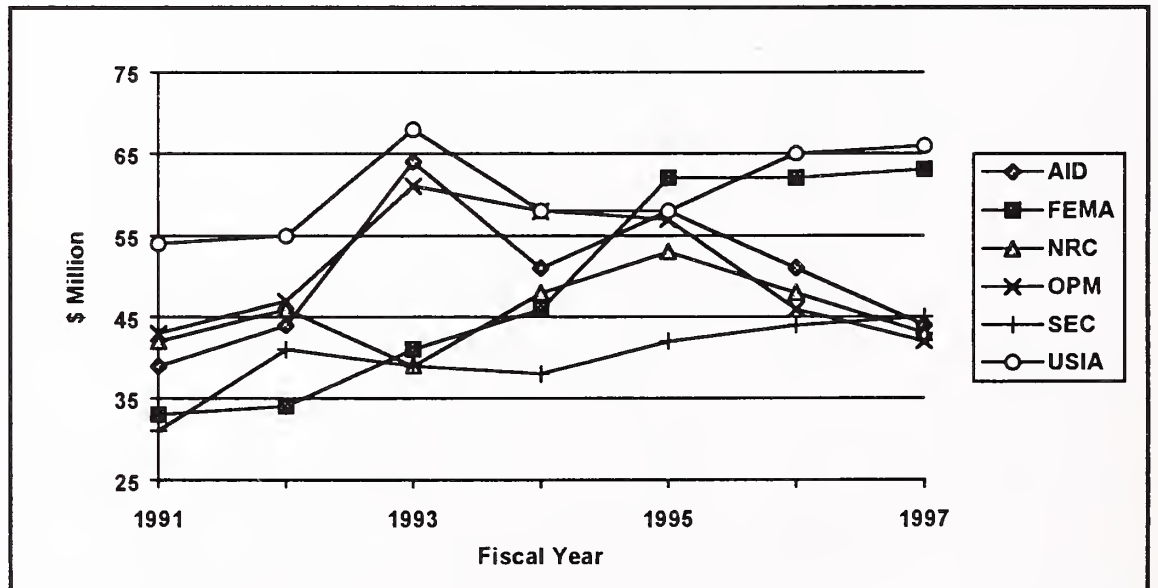
B

Application and Technology Trends

In an INPUT survey conducted in 1993, agency and industry representatives were asked to identify technological factors that would alter the federal government's spending for information services and applications development at agencies. Four of the five top-ranked factors in 1993 were again most frequently present in a survey of more than 200 contract opportunities in 1996. Exhibit III-13 indicates network expansion to be the top-ranked technology issue this year. With increasing interest in client/server architecture, operating systems also will affect government programs. Improved performance of data centers appeared this year, replacing AI in the list of the top technology issues affecting federal government programs.

Exhibit III-13

Technological Issues Affecting Federal Government Programs

- ❏ Expanded networks/LANS
- ❏ Advancements in operating systems
- ❏ Increased microcomputer capabilities
- ❏ Improved imaging/graphics
- ❏ Data center upgrades

Source: INPUT

Requirements for data center consolidation and modernization of existing centers are fundamental to federal government downsizing, and they are a major influence in the demand for professional and other commercial services. Both civilian and Defense programs expect to benefit from fewer, but upgraded facilities offering greater processing capability.

Several IT application sub-markets are driving the overall professional services (Exhibit III-14) market, including:

- ❏ **Office Information Systems (OIS) Professional Services** - 7% CAGR

- ❏ **Systems Integration Professional Services** - 7% CAGR

- ❏ **EDI Professional Services** - 7% CAGR

- ❏ **Document Management Professional Services** - 8% CAGR; maintenance at 6% CAGR

❑ **Security Professional Services** - 6% CAGR

❑ **Telecommunications Professional Services** - all segments are strong (software development 7% CAGR; systems integration at 7% CAGR; facilities management at 5% CAGR; design and consulting at 6% CAGR; education and training at 6% CAGR).

Exhibit III-14

Technology Trends, FY 1996–FY 2001

CAGR FY 1996-FY 2001
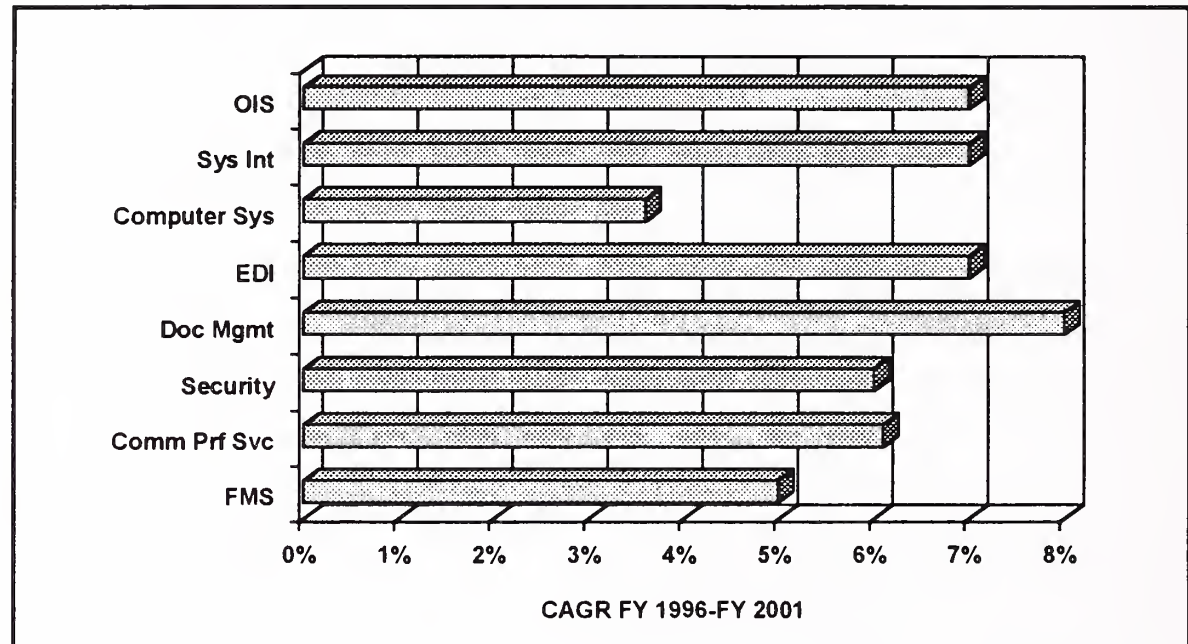
Source: INPUT

Another major application to be reckoned with is the Year 2000 issue, which is projected to be a major driving force in the professional services market. The Social Security Administration (SSA) started a 300 man-year effort to correct the Year 2000 problem in 30 million lines of code as early as 1989. Other than SSA, most agencies were in denial about the inevitable date code problem until early this year, when OMB required agencies to submit Year 2000 cost estimates with A-11 budget submissions. OMB has reacted to this by getting SSA to chair the Year 2000 Inter-agency Committee to help agencies cope with the Year 2000 issue. Most agencies are now represented and INPUT expects more affirmative action in the near term.

Federal agencies will spend $31.3 billion from FY 1996 through FY 1999 on total services contracted out. Of that, only $7.7 billion is ear-marked for software development products and services. While OMB recently estimated the total cost of correcting the Year 2000 problem at $2.3 billion for the entire federal government, industry estimates continue to reach upward of $30 billion — more money than is available to address the problem. OMB continues to affirm that it will approve no additional money to fund date-code related repairs.

Although cost estimates have been submitted, most federal agencies have not actually set aside money in their FY 1996 or FY 1997 budgets. INPUT sees IT research and development (R&D) and program office funding as the first areas to be cut in order to make up the shortfall. The political process will turn up the heat on agencies, but with no funding relief in sight.

C
Major Issues and Driving Forces

1.   Major Issues

Both the Federal Acquisition Reform Act of 1996 and the Information Technology Management Reform Act of 1996, contained in the National Defense Authorization Bill of 1996, usher in a new era of acquiring and managing IT. By streamlining purchasing practices and eliminating cumbersome regulations, the reform is intended to solve the following problems:

❑   Oversight too late in process

❑   Dual review slows down process

❑   Alternative or reengineered work processes not considered before automating

❑   Obsolete technology in use

❑   Wasteful IT spending

❑   Poor mission/program performance

❑   Government-wide expertise not leveraged

❑   Non-incremental approach to systems acquisition.

The reform places responsibility and accountability squarely on the agencies, while easing their regulatory burden (Exhibit III-15):

❑   Brooks Act repeal shifts responsibility from GSA to agencies

❑   Agencies can buy systems in smaller, incremental phases

❑   OMB Director and Chief Information Officer (CIO) to be held accountable

❑   Simplified procedures for buying commercial off-the-shelf (COTS) items valued up to $5 million

❑   Office of Federal Procurement Policy (OFPP) can waive any special government contract clauses for COTS items

❑   Agencies can limit which suppliers go into negotiation after initial proposals received.

Exhibit III-15

Procurement & IT Management Reform

Aspect	Brooks Act Era ('65–'96)	ITMRA Era ('96-->)
Focus	Technology and process	Mission, cost-effectiveness and performance
Emphasis	Single agency solutions	Interagency coordination; Sharing of expertise
Procurement Authority	Split	Agencies
Accountability	Diffuse	Agencies
Enforcers	GSA	OMB Director and CIOs
Accountability Tactics	GSA exclusive IT procurement authority	Agency budget linked capital planning and investment control; Agency performance and results-based management
Protest Jurisdiction	GSBCA	GAO
Implementation Tactics	Massive, multi-year systems development	Modular 12–18 month IT infusions
Regulation Tactics	DPA; FIRMR	No DPA; FIRMR on the way out
Acquisition Tactics	Agency investment	Multi-agency investment
Acquisition Process	Prove acquisition integrity	Prove mission/business processes; Plan before purchasing
Negotiation Tactics	All bidders through process	Bidders excluded after initial proposals
COTS	Option	Preferred approach
Industry communications	Cautious	Encouraged

Source: INPUT

Budget deficit control is expected to affect the rate and/or extent of IS modernization at the agencies. Continuing economic and political sensitivity to the rising budget deficit could negatively impact a number of acquisitions in the less-than-critical Defense and civilian technology sectors.

Furthermore, the federal government currently does not have the requisite level of in-house staff to support the quality or quantity of IT services mandated by Congress and expected by the American people. The early retirement programs are continuing in some agencies, and many of the personnel taking advantage of the opportunity possess the necessary skills and knowledge, now lost, to develop and implement critical programs and automated systems.

IT management and acquisition reform has also highlighted a number of challenges and issues faced by the professional services end-user community. Such challenges are influenced by and often stem directly from the aforementioned economic factors that shape the federal market. While many issues are present, a selection of the more significant challenges follows:

❑   Developing an agency-wide IT architecture

❑   Providing effective IT infrastructures and related services

❑   Measuring the effectiveness of IT in achieving agency mission

❑   Ensuring Year 2000 operations

❑   Integrating and consolidating information systems and data centers

❑   Implementing and coordinating business process re-engineering efforts

2.   Driving Forces

Key driving forces behind the federal market for information systems and services are summarized in Exhibit III-16. The federal government faces a number of important issues — namely, to reduce costs and improve operations. Some of these issues involve improved processes; many involve a set of driving forces that continues from one year to another with little resolution. They involve an increasing workload, reduced operating resources, growing criticism from the public and the lack of a clear sustained focus on what is important and what should be done.

Exhibit III-16

Federal Government Sector Driving Forces

❑ Spending Slows	❑ Spending Increases
⇒ Downsizing Process	⇒ Staff Reductions
⇒ Budget Cuts	⇒ New Initiatives
⇒ Commodity Pricing	⇒ COTS Initiatives
⇒ BPR	⇒ IT Fever
⇒ IT Productivity Gains	⇒ NPR
⇒ Federal Programs To States	⇒ Distributed Computing

Source: INPUT

Market drivers both push and pull at the federal marketplace. Federal spending slows with the following:

❑ **Downsizing process** - as the federal workforce shrinks, less computing power is required to run government

❑ **Budget cuts** - some agencies will have to cut IT expenditures to meet their fiscal requirements. The budget knife is even starting to get to the information resources management (IRM) staff

❑ **Commodity pricing** - agencies are seeking to turn as many IT buys into commodity buys to leverage their buying power

❑ **BPR** - process re-engineering requirements are increasing. If agencies reap the expected benefits, then new processes may require less IT to accomplish. However, short term effects may actually drive up requirements for consulting and education on methods of restructuring

❑ **IT productivity gains** - if the gains are realized through the use of IT, then we may see less need for IT as we reduce staffing through automation, etc.

❑ **Federal programs to states** - through block grants and the like, funds are being directed away from the federal arena to the state

Federal spending increases with the following:

❑ **Staff reductions** - agencies seek to do more with fewer people by automating more of their processes

❑ **New initiatives** - agencies will always be legislated more functions to perform, requiring more automation

❑ **COTS initiatives** - the trend is away from home-grown systems to store-bought, but agencies are spending many times the purchase price to customize solutions to their *unique* needs

❑ **IT fever** - agencies feel IT offers the closest thing to the "silver bullet"

❑ **NPR** - the current Administration is promoting the use of IT to fix the government's efficiency and effectiveness problems

❑ **Distributed computing** - the move away from centralized computing power relies heavily on a strong infrastructure, which commands large sums of money

As Congress and the public continue to make new demands (notably of the civilian agencies), IT and professional services will continue to be viewed as the "silver bullet" to save a program or allow a new program to get off the ground. Also, agencies continue to look at getting back to their core mission, which will likely foster further downsizing and outsourcing. The Government Performance and Results Act (GPRA) will also drive the professional services market. GPRA requires agencies to change the traditional IRM measures of IRM outputs. The traditional way involved planning and budgeting, executing plans and budgets, and measuring and reporting outputs (accomplishments). With GPRA, agencies have the requirement and opportunity to develop a new type of "outcome measures" reflecting IT's contribution to agency mission goals and objectives. Next, annual performance plans with specific targets and measures are developed, plans are executed and accomplishments (outputs to outcomes) are used in the process of managing the agency. Agencies need help aligning their IRM model with the agency mission model, which poses new opportunities for professional services vendors.

D

Conclusions

Industry and agencies recognize that a number of factors have slowed the explosive growth in information technology that characterized the 1980s. At the same time, there are factors that can influence the professional services market and the IT market overall for continued activity during the end of the 1990s decade.

Look for the agencies to study the latest acquisition statute to determine their level of acquisition discretion. This will result in each agency going its own way when acquiring IT and services. Vendors now face less predictable procurement processes versus the one they had come to work so well. Expect procurements to become more of a relationship buy. Vendor capture costs will increase to win the smaller, more numerous acquisitions of the future.

While the overall IT market is still experiencing growth because of the significant jump in civilian agency initiatives, only certain sets of agencies will live up to this expectation. The $500 million to $1 billion group (Agriculture, Commerce, Justice, SSA and VA) in IT budget size is growing at a very healthy rate. The next best group is the small agencies (less than $100 million in IT budget size). Finally, there are some individual agencies, such as Education, that are presently big IT spenders. The overall downward shift in Defense IT outlays will likely continue for some years to come.

Competition in the federal market will continue to evolve as the growth rates and number of significant opportunities decline. Many firms that have not done business previously in the federal government are entering the market. Defense firms, such as aerospace firms, are examining the civilian agencies for replacement markets. Some firms are following the dollars that are leaving the federal arena for the states.

Established players are repositioning themselves to survive the new federal government environment. The large professional services firms with a strong market position are digging in and slimming down to capture new and recompetitive business. Smaller firms and niche market firms are either forming alliances or moving into the equally depressed commercial market. Competition in this market has become more sophisticated and fierce.

The changes in set-aside contracting, including small business, small disadvantaged business and 8(a), have prompted new strategies by these firms for staying alive. Expect consolidations and many new teaming arrangements.

Reinventing government is emerging as many different initiatives. However, there is a very strong inclination toward IT as the end-all solution. Federal agencies can improve their performance by reviewing their missions and automating after re-engineering. Only those programs necessary in attaining the missions will be retained. The mission's emphasis will result in new priorities and redirected spending.

IV
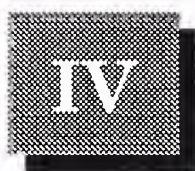
Market Forecast

INPUT dissects the federal IT budget elements and recombines them into convenient industry terms. The first reassembling provides an overall perspective of that portion of the IT budget spent on contracts for systems and services. In the remainder of this section, INPUT provides forecasts and discusses trends of the individual delivery modes within the professional services portion, as defined in Appendix A.

A
Federal IT Market Overview

The overall market planned for federal acquisition of information systems and services in FY 1997 is $20.9 billion, forecasted to reach $26.0 billion in FY 2001. This represents a compound annual growth rate (CAGR) of 5%, as shown in Exhibit IV-1.

Several economic and political factors discussed earlier may reduce this IT growth rate moderately to significantly. The current Administration continues to believe that IT holds the key to improved service. Over the next few years, benefits should be visible in the effort to reduce operating cost. Without demonstration of cost savings, Congress may withhold budgetary support to many large IT-based programs. Such scaling back is already evident in defense spending.

The largest component of the addressable information systems and services market in recent years has been commercial services. The FY 1995 spending level for commercial services estimated last year at $7.0 billion was reported as an actual $6.9 billion this year. The budget requests for FY 1996 totaled $7.4 billion, $527 million less than requested for FY 1995, with gradual increases in expenditures from this reduced baseline through FY 2001 expected. This market segment is expected to grow at a 6% CAGR to $9.9 billion in FY 2001. Commercial services include professional services, processing services, systems operations and

maintenance. This report focuses on the general professional services market and professional services delivered under a systems integration or outsourcing contract. Current agency long-range plans indicate a continuing need for industry operational support, despite program cancellations and prospects of consolidating computing resources.

Estimated spending for computer systems is greater for FY 1996 than the actual spending that agencies reported for FY 1995. For some time, computer systems has been a gradually declining market, down from a CAGR of 5% projected in FY 1989. Prospects for computer systems spending growth are improved since last year. Levels will rise in FY 1997 and continue through FY 2001 at an increased rate (4%) than was forecast last year. Computer systems is no longer the largest IT component as it was in the past. Computer systems includes systems integration, turnkey systems and major equipment additions and replacements.

The telecommunications market remains at steady growth through FY 2001, but likely below the 10% CAGR forecast. Agencies reported lower anticipated spending this year for this segment through FY 2001. Actual spending in FY 1995 was lower than estimated last year, as agencies continue to benefit from reduced long distance rates, reliance on existing telecom infrastructure and postponed telecommunications contracts in anticipation of the follow-on to FTS2000. The communications segment includes circuit/time charges under FTS2000, network services and customer-premise equipment. INPUT expects these services to increase from $5.1 billion in FY 1996 to $6.0 billion in FY 2001. The forecast includes procurement of a number of dedicated data networks, more LANs and increasing digitization, but at decreasing tariffs.

The expenditures shown in Exhibit IV-1 are based on those requested by agencies in their A-11 Section 43 reports.

Exhibit IV-1

IT Markets, FY 1996–FY 2001

Source: INPUT
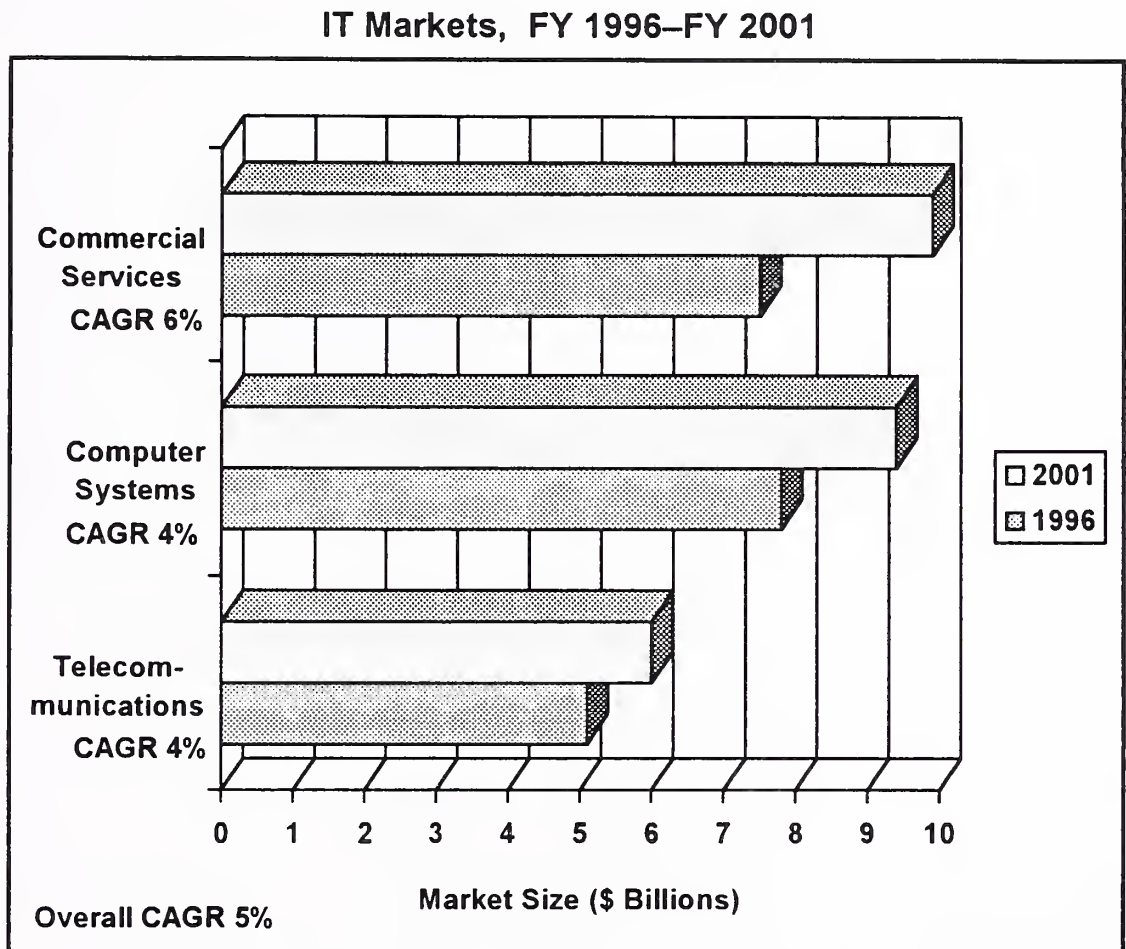
B
Professional Services Market Overview

The federal market for professional services is expected to sustain a CAGR of 6% from FY 1996 to FY 2001, growing from $5.5 billion to $7.5 billion, respectively. Government end-users will continue to be faced with declining personnel levels, tightened federal funding and the need to increase the efficiency of information resources over the next several years, all of which will drive the growth rate of the professional services market above the projected growth of the total IT market. While the anticipated growth factor in the professional services market from FY 1996 to FY 1997 is a moderate 2%, this figure is expected to recapture the average 8% annual growth of prior years from FY 1997 to FY 1998 and from FY 1998 to FY 1999. The current low growth factor is largely attributable to the historical low agency projections for IT resources in OMB's Circular A-11 Exhibit 43. The current and projected need for contractor assistance makes the federal government the largest user group for professional services in the U.S. Exhibit IV-2 highlights the total federal market for professional services in FY 1996 and its projected growth to FY 2001.

Exhibit IV-2

Total Professional Services Market, FY 1996–FY 2001
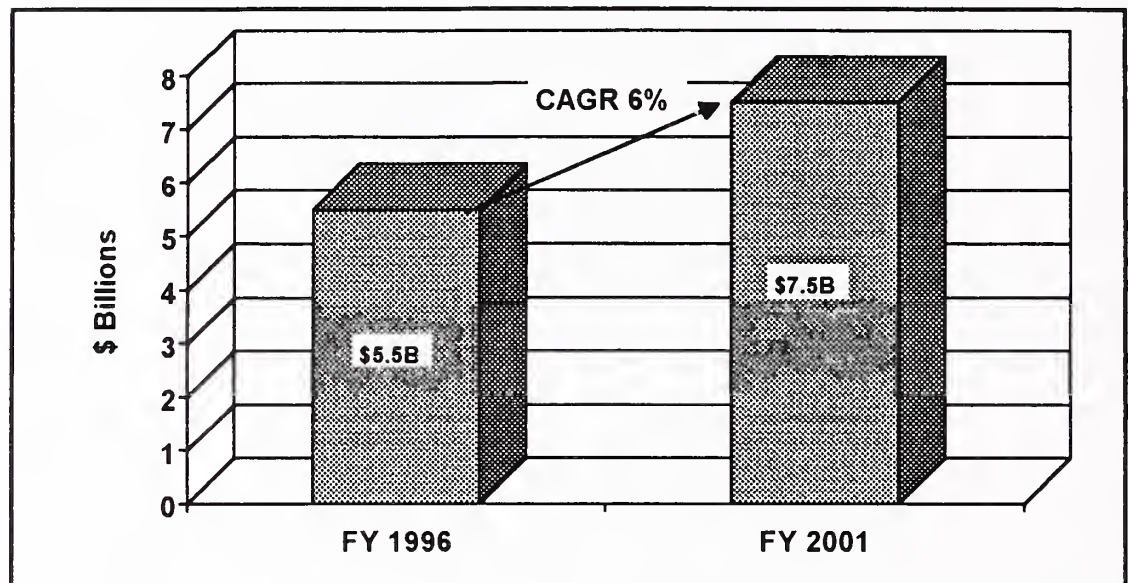
Source: INPUT

At $3.9 billion, civilian agencies accounted for 71% of the total professional services market in FY 1996, with DoD accounting for the remaining 29%. As shown in Exhibit IV-3, the compound annual growth rate for the civilian market is more than double that of the Defense market for vendor services over the period analyzed. While DoD agencies continue to rely heavily on all service modes, their ongoing downsizing and reorganization efforts will undoubtedly have a stagnating effect on the ability to fund vendor services requirements. Based on projected growth rates, civilian agencies are expected to command approximately 75%, or $5.8 billion, of the total professional services market in FY 2001 — a growing share of a growing market.

The professional services market is commonly conceptualized as three basic delivery modes — software development, design and consulting, as well as education and training. However, this report also analyzes professional services as they pertain to systems integration and outsourcing requirements within the federal government. For the sake of clarity, software development, design and consulting and education and training are referred to as "basic" professional services to differentiate them from systems integration and outsourcing services. The relationship between the distributed modes of the professional services market is illustrated in Exhibit IV-4.

Exhibit IV-3

Civilian Versus Defense Markets for Professional Services, FY 1996–FY 2001

Defense
CAGR 3%

Civilian
CAGR 8%

Legend: □ 2001 ▨ 1996

0   1   2   3   4   5   6

User Expenditures ($ Billions)
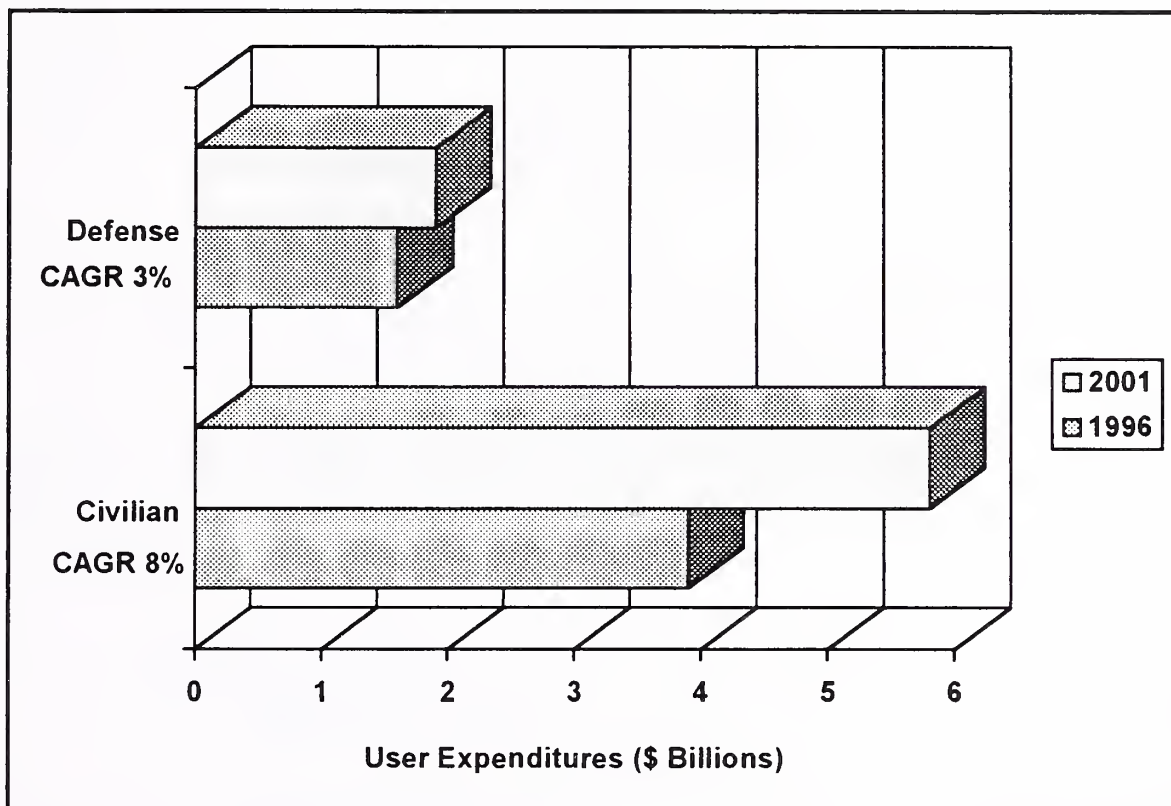
Source: INPUT

Exhibit IV-4

Professional Services Market Segments

Basic Professional Services

Systems Integration

Systems Operations/ Outsourcing

Consulting Services

COCO

Software Development

GOCO

Education & Training
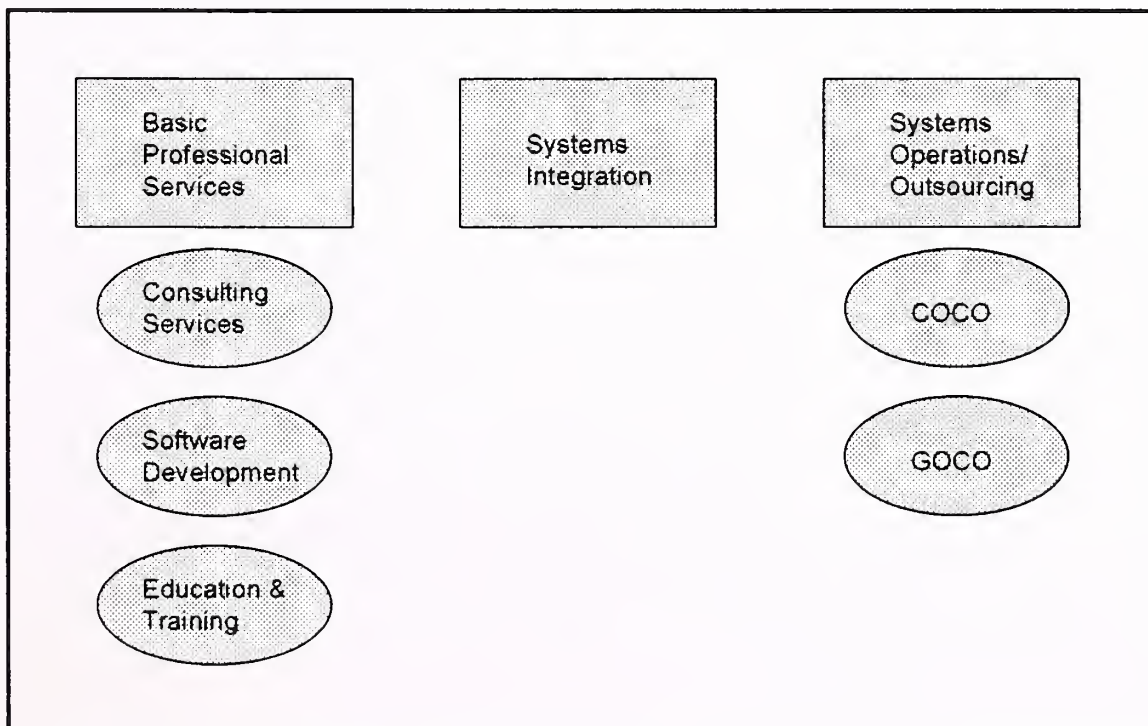
Source: INPUT

As shown in Exhibit IV-5, the basic services submarket represents the largest segment of the total market. Its growth is all the more impressive given that it starts with the largest numbers. Last year's CAGR forecast of 6% has now been adjusted to 7% to reflect renewed spending in obligations, particularly for developmental systems. The systems integration component continues to grow at healthy levels and systems operations show moderate growth, and that growth is primarily driven by operations of government-owned facilities.

Exhibit IV-5

Professional Services Market — All Segments, FY 1996–FY 2001
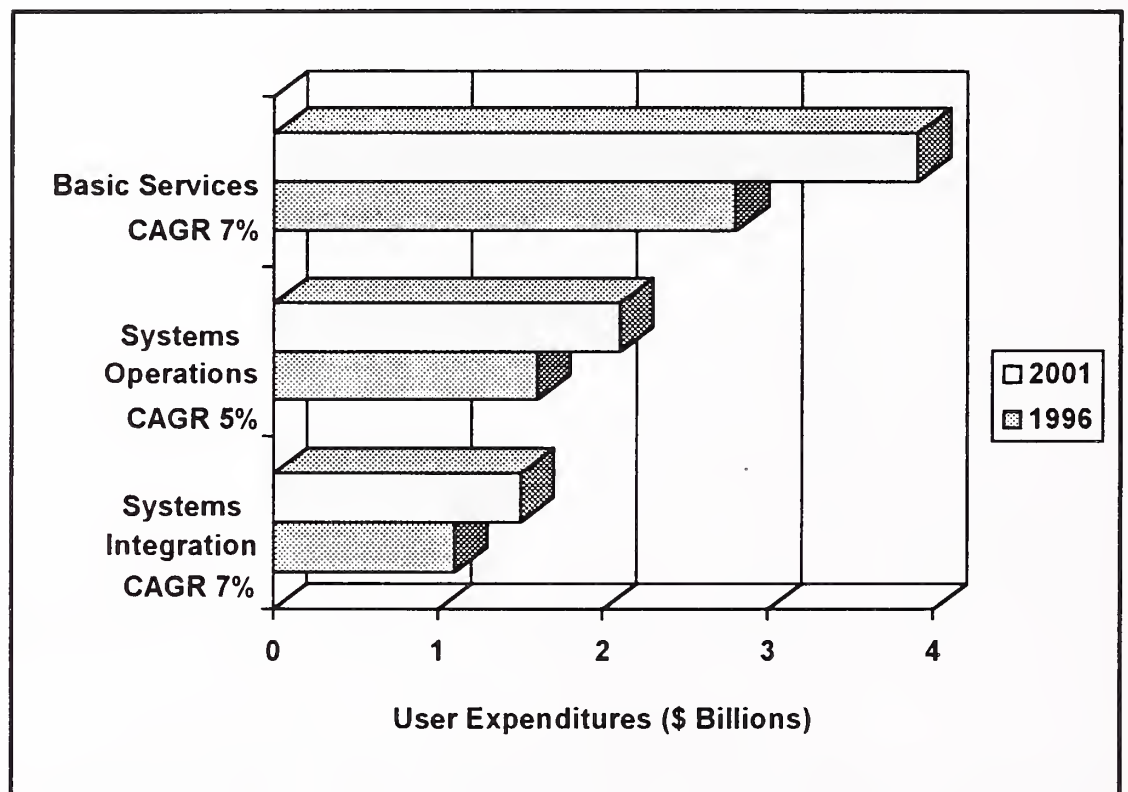
Source: INPUT

Exhibit IV-6 highlights the distribution of federal expenditures by professional services market segments in fiscal year 1996. Software development represented the largest single submarket at 31% ($1.7 billion) of the total professional services market. Systems operations and outsourcing, including both government- and contractor-owned sites, captured the second largest portion of the market at 29% ($1.6 billion). Collectively, basic professional services represented approximately 51% of the total market in FY 1996. These market shares are expected to remain relatively constant for the next five years.

Exhibit IV-6

Professional Services Market Segment Distribution, FY 1996
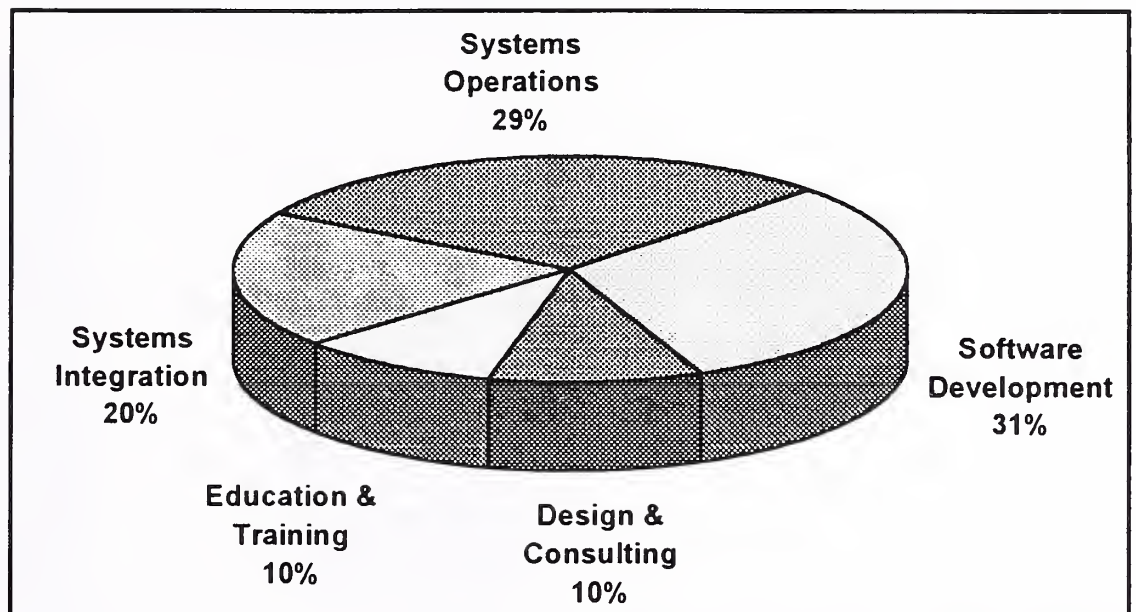
Source: INPUT

The sections that follow offer a more detailed analysis and forecast of the individual professional services market segments.

C

Basic Professional Services

Basic professional services includes consulting, design, education and training and software development. This segment does not include the professional services associated with systems integration, systems operations and telecommunications. Telecommunications professional services is not addressed as part of this report. Market information on this services sector is covered in INPUT's Federal Telecommunications Market 1996–2001 report.

The federal professional services market is growing at a CAGR 1% higher than was forecast a year ago. Actual reported spending levels for FY 1995 were higher than estimated last year by the government. Although higher levels are forecast through FY 2001, the rate of growth is dropped from the 9% forecast FY 1994. With an estimated total of $2.8 billion allocated in FY 1996, the dependency on contractor sources for services already has begun to materialize, but reduced spending levels overall are being felt in this market. As shown in Exhibit IV-7, this market is projected to increase to $3.9 billion by FY 2001, at a CAGR of 7%, returning to the growth levels forecast in FY 1991 and 1990, but less than the 8% of FY 1989, and significantly below the 13% reported in FY 1988.

Exhibit IV-7

Basic Professional Services Market, FY 1996–FY 2001
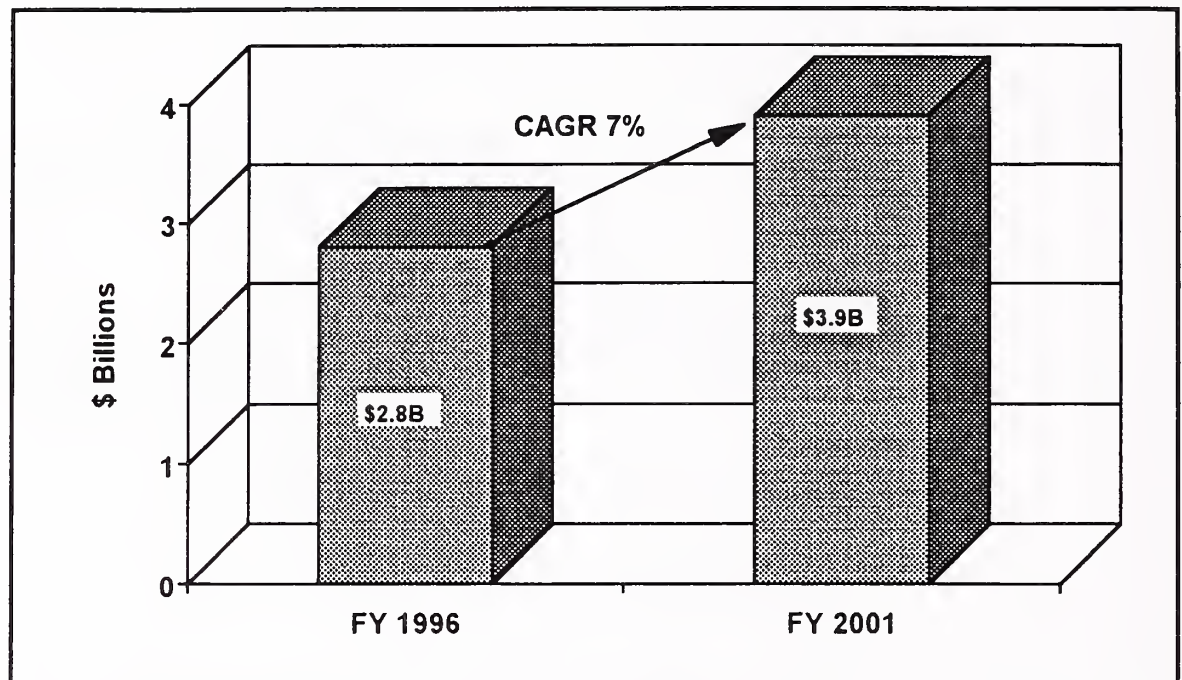
1.   Software Development

Software development services, also referred to as programming and analysis, is projected to grow from $1.7 billion in FY 1996 to $2.4 billion in FY 2001 at a CAGR of 7%, as shown in Exhibit IV-8. This is the same as last year's forecast, but it continues to represent a dependency on outside resources for software development. This dependency will continue through the outyears.

The software development submarket includes:

❑   Hardware and/or software system design

❑   Custom software development

❑   Modification of commercial software products

❑   Software testing of custom and commercial packages

❑   Software conversion

❑   Maintenance of custom applications software

❑   Independent verification and validation of software packages prepared by other vendors

The declining availability of programming skills in the federal government is the most significant factor behind the projected growth. Government staffing limits and the backlog of software maintenance tasks at most government data centers contribute to the demand for vendor assistance in this service mode. The need to correct applications for the Year 2000 situation will keep this a healthy market.

A number of programs planned for near-term procurement and recently awarded should sustain the projected growth. Examples include the Army's *Systems and Software Engineering Support,* Navy's *Corporate Information Management Standard Procurement* and DoD's *Research and Engineering Network Inter-Site Services* contracts, among others.

Interoperability pressure (more specifically, the ability to exchange data) is the driving force behind the use of contractors in software development. Vendors can more readily provide the expertise needed to knit together different platforms and their applications software to accelerate data interchange.

Exhibit IV-8

Basic Professional Services Submarkets, FY 1996–FY 2001
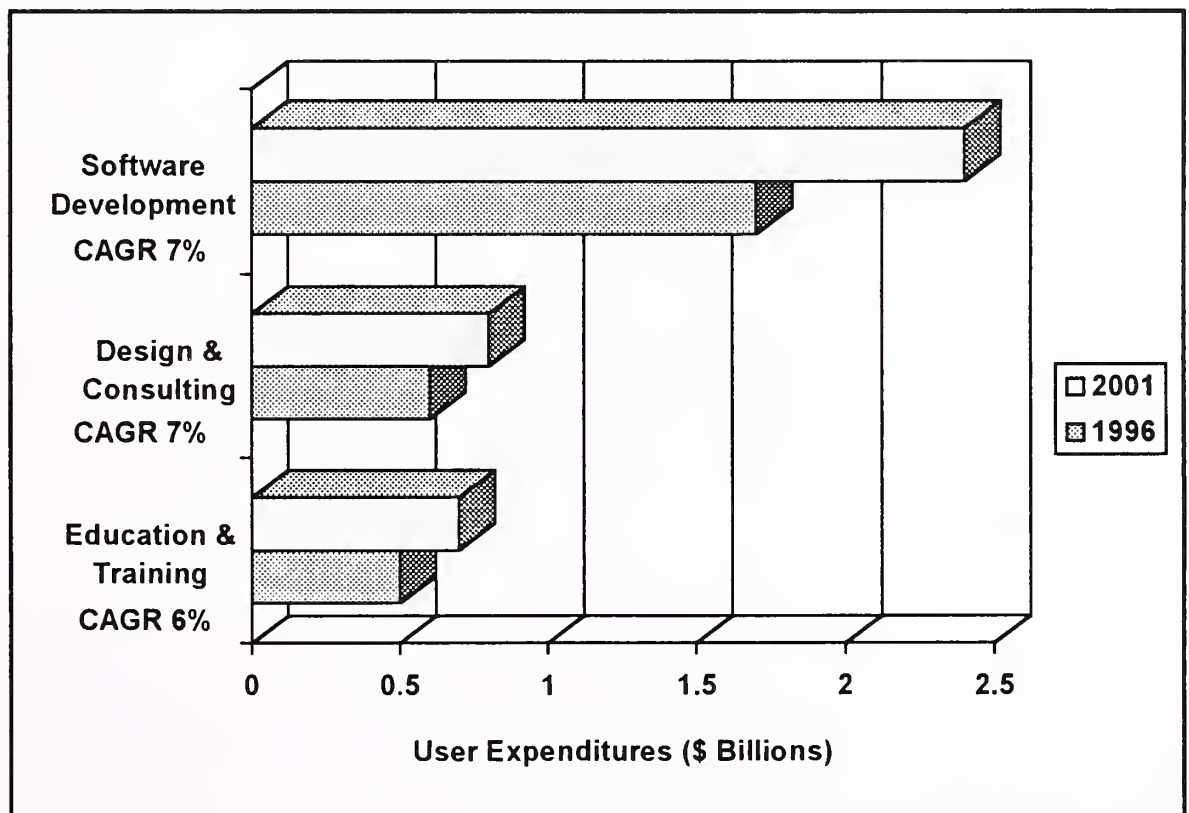
Source: INPUT

2.   Design and Consulting Services

IT consulting services in the federal market will grow at a CAGR of 7%, from about $561 million in FY 1996 to $771 million in FY 2001. The growth forecast three years ago was depressed by the slowdown in CIM/DISA initiatives, but renewal of systems engineering and development activity for assessing the Year 2000 issue, plus the continuing shortfall of systems experts in the federal workforce, contributes to growth in this segment. Both the renewal and the shortfall contributed to a 1% CAGR increase over last year's forecast.

The types of services contracted include:

❏   Feasibility studies

❏   ADP requirements analyses

❏   Systems audits

❏   System engineering and technical direction (SETD)

❏   System engineering and technical assistance (SETA)

❏   Software engineering and technical assistance

The primary demand factor in this submarket is agency need for assistance in producing the technical justification for planned improvements in information technology resources. Agencies are understaffed in the technical planning and evaluation areas.

In the past, congressional pressure was exerted on agencies to minimize the use of outsiders (and previous government employees) in functions perceived as governmental management. This is no longer an issue. Government agencies are encouraged to rely more on outsourcing services, even in the area of acquisition support.

3.   Education and Training

Education and training services relate to information systems and services for the user, including computer-based training (CBT), computer-aided instruction (CAI), computer-based education (CBE) and vendor instruction of user personnel in operations, programming and software maintenance.

The government normally contracts for the following separately from systems integration programs:

❑ Training programs

❑ Books and manuals

❑ Seminars

❑ Automated training systems

In previous years, this delivery mode eroded under both budget pressures and inclusion of the services in systems integration programs.

The demand existed for training and education, but stretched IT budgets compromised the training component. Agency officials had to seek funding for training elsewhere, usually from within operating budgets. This submarket is currently recovering in response to acknowledged demands from the user community for educational services. User demand is driven by the implementation of new software, tools and sophisticated hardware. The pace of technological change will also sustain this market in the future. Technical books and other user manuals become obsolete almost as fast as they are written. Furthermore, the likely inability of a single contractor to keep up with technological and business process changes within any given agency will foster increased use of teaming arrangements among vendors.

Computer training for desktop technology and LAN administration was provided in-house by a number of larger agencies under their regular training budgets. Courses for user computing, LANs, distributed processing and new software tools are better generated by industry.

The forecast in previous years has been for no growth, maintaining current levels of annual spending. However, with growing client/server capabilities and network operations, the training demand is pushing this submarket upward, relative to other market segments. From an artificially depressed level of $400 million in FY 1994, the market is expected to grow to $708 million at a CAGR of 6% through FY 2001.

D

Systems Integration Professional Services

The federal systems integration (SI) market is composed of four submarkets — hardware systems, software products, professional services and "other services." The overall market for systems integration is expected to slow down to a moderate 4% CAGR, from $3.9 billion in FY 1996 to $4.8 billion in FY 2001, as shown in Exhibit IV-9. The SI market is not growing as fast as most observers had anticipated in 1991, but it is still one of the fastest growing IT segments in the federal government.

Unlike the commercial markets, hardware outlays are the predominant investment. The hardware segment was holding at 55% in recent years, but fell to under 50% last year, where the segment is expected to hold through FY 2001 at a CAGR of 3%. The size and growth rate of the software products component of SI is unchanged since the 1991 forecast. Outlays were $354 million in FY 1995, are estimated to be up slightly in FY 1996, but are growing at a 2% CAGR to $447 million in FY 2001. The "other services" category, although relatively small in the federal market compared to the commercial market, includes transaction processing and network services during the implementation phase, site preparation, mechanical engineering and initial data processing supplies. This segment is expected to grow at a 3% CAGR.

Exhibit IV-9

Total Systems Integration Market — All Segments, FY 1996–FY 2001
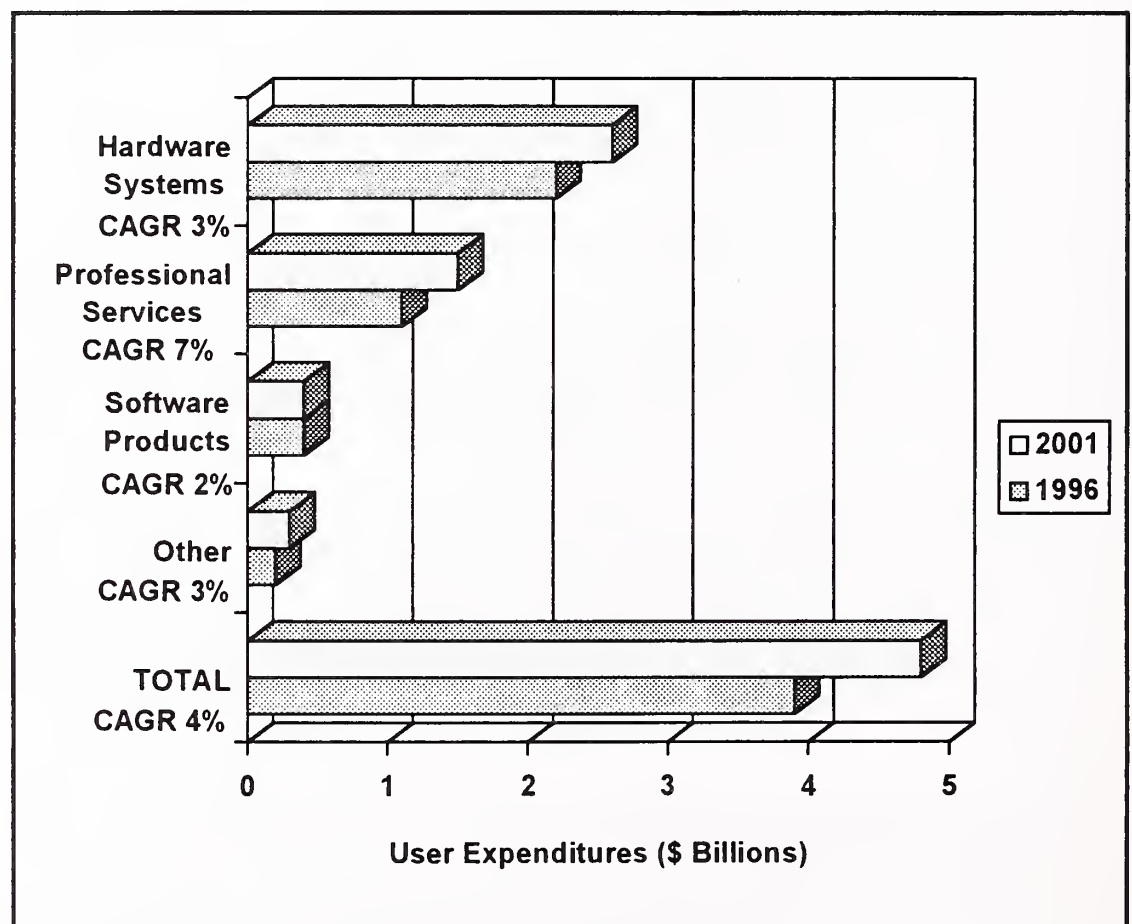
Source: INPUT

SI professional services grew at 17% per year from FY 1987 to 1989, but dropped to 15% in FY 1990. Reported expenditures for FY 1994 were $1.0 billion, less than the amount forecast for any period since FY 1991. However, increases are expected in this segment, as shown in Exhibit IV-10. Continued delays in spending for several DoD systems and problems with Treasury programs account for most of the shortfalls in FY 1994. FY 2001 outlays now are expected to reach $1.5 billion, less than the $2.3 billion predicted in 1992, but representing a 7% CAGR over FY 1996 expenditures of $1.1 billion.

Exhibit IV-10

Systems Integration Professional Services, FY 1996–FY 2001
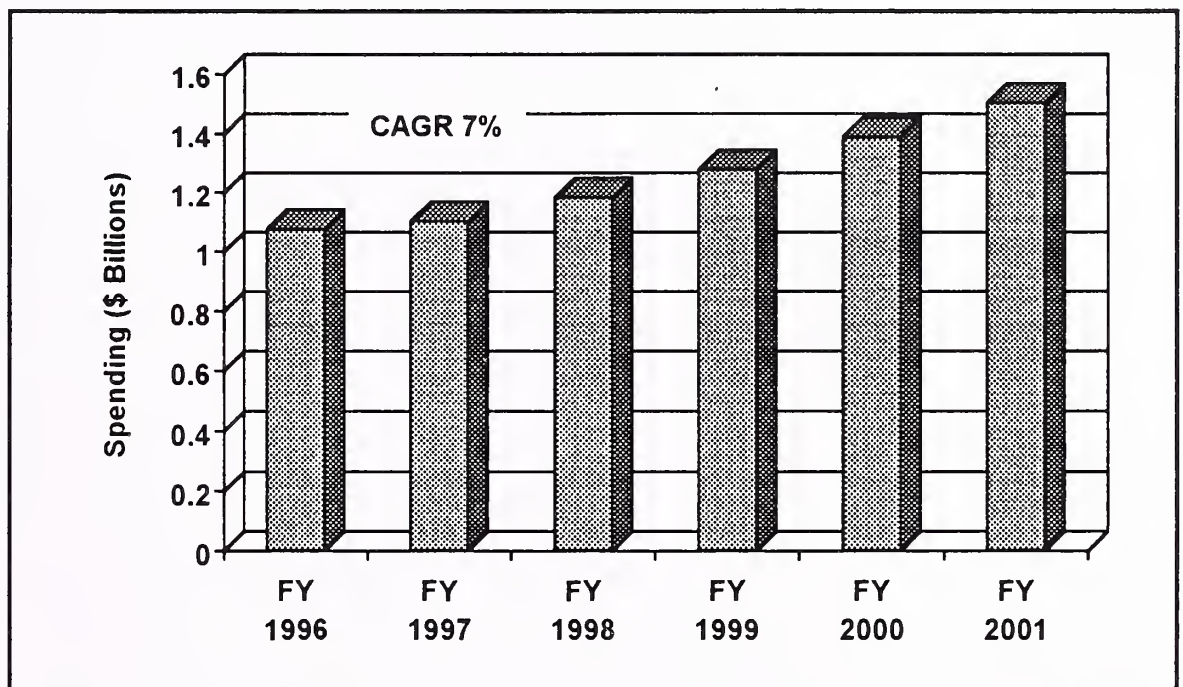
Source: INPUT

In FY 1990, outlays for professional services were 51% of the total spent for SI. The proportion had since declined to 27% in FY 1994, but has increased in FY 1996 to 27% and is expected to increase to 31% by FY 2001.

The services included in this market are:

❑ Project management

❑ Consulting services

❑ Design services

❑ Integration services

❑ Custom software development

❑ Education and training

❑ Documentation

Currently, SI professional services spending by civilian agencies exceeds that of Defense by approximately $450 million. At $765 million in FY 1996, total civilian expenditures accounted for 71% of the total systems integration professional services market, and they are expected to command 78% in FY 2001. This level of expenditure reflects current budget constraints in DoD. INPUT expects these constraints to continue throughout the forecast period, largely driven by Center for Information Management (CIM) plans to reduce Defense systems spending and continued pressure on the budget by the House Appropriations Committee. The Senate appears willing to continue a high investment in Defense information technology spending. For 1996, DoD expects to spend $10.6 billion on information technology, and the Senate has indicated a willingness to invest additional funds for modernization. Not all major SI initiatives are being canceled; some may be deferred or stretched out. As a result, the Defense market will continue to lose ground to the civilian market demand over the next few years. Exhibit IV-11 highlights the disparity in growth and market share between Defense and civilian agencies in this market segment.

Largely driving the overall SI professional services market will be risk management, which is heavily emphasized in the federal market. Despite system complexity and the government's reputation for stating incomplete requirements, the agencies want functioning solutions — not just the offering of sophisticated, interesting technology. Caution must be tempered by provisions for SI professional services in the future. Another factor is the continuing conversion of existing systems and applications to minimize delays in and costs associated with cutting over to new systems.

Exhibit IV-11

Civilian Versus Defense Markets for SI Professional Services, FY 1996–FY 2001

Overall CAGR 7%
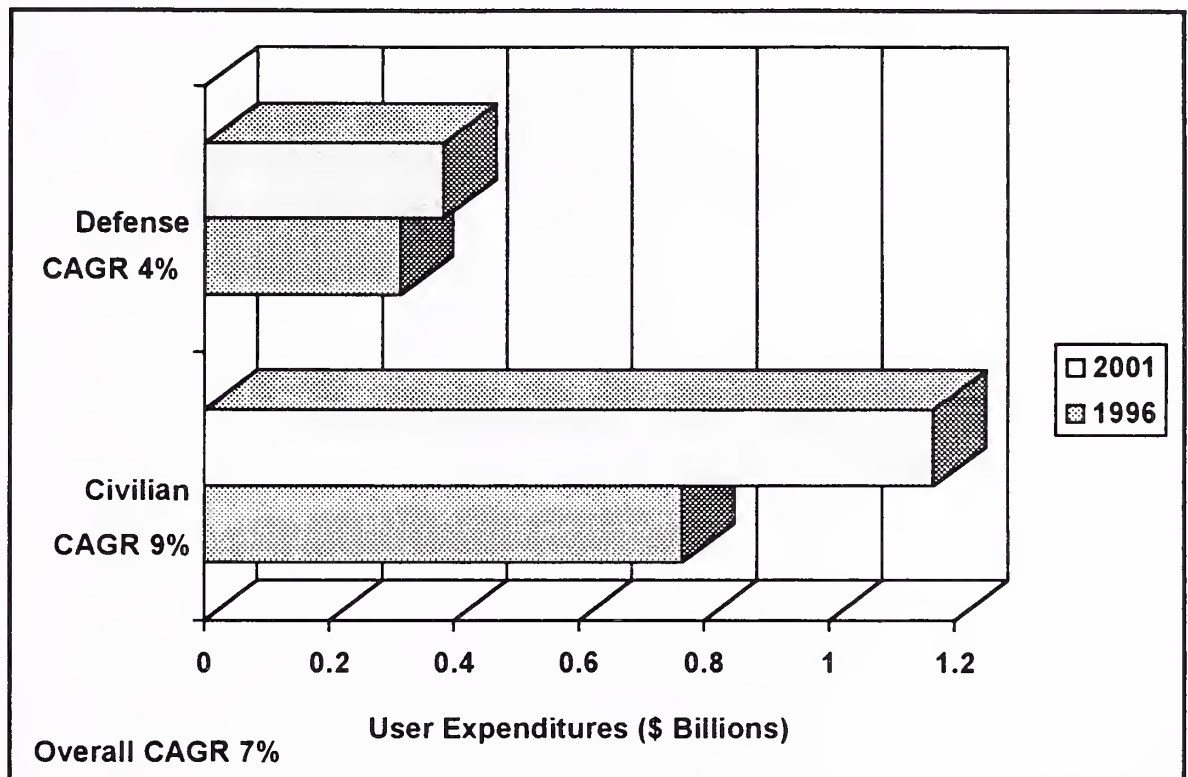
E

Outsourcing Professional Services

Outsourcing professional services, also referred to as systems operations, contains two submarkets — contractor-owned, contractor-operated (COCO) and government-owned, contractor-operated (GOCO). As noted in Exhibit IV-12, federal systems operations expenditures were about $1.6 billion in FY 1996, the same as in FYs 1992 through 1994, but are expected to grow at a moderate CAGR of 5% to $2.1 billion in FY 2001. The growth rate has increased slightly since the FY 1994 forecast but is not again expected to reach the 15% level predicted in 1989, unless applications are outsourced at greater levels than are currently identified by agencies. This outsourcing would have to be accompanied by a significant increase in overall IT spending levels.

Systems operations began to grow again in FY 1990, after experiencing CAGRs of 6% to 8% since the cutbacks of FY 1983, when a number of new systems were implemented. The turnaround began with staffing restrictions and slowdown of new system acquisitions imposed by the Gramm-Rudman-Hollings Budget Control Act and a slowdown in defense spending.

Exhibit IV-12

Outsourcing Market, FY 1996–FY 2001

GOCO
CAGR 5%

COCO
CAGR 5%

□ 2001
⊠ 1996

0   0.5   1   1.5   2

User Expenditures ($ Billions)

Overall CAGR 5%
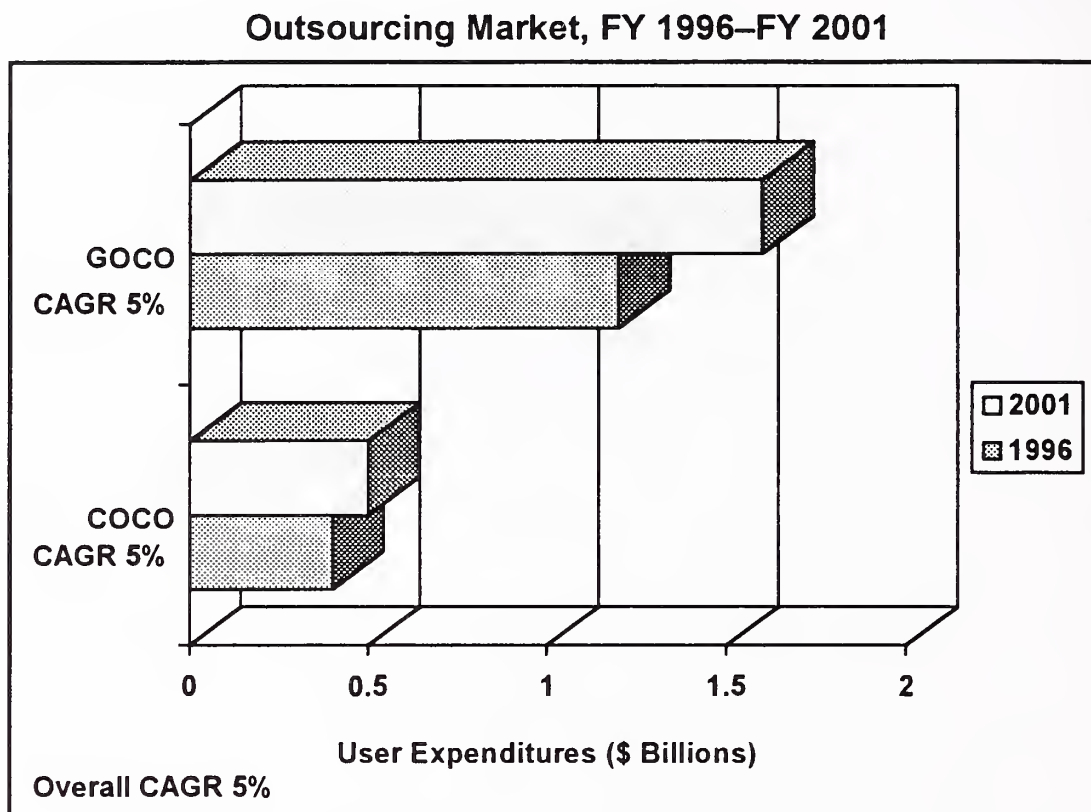
Many Republican lawmakers continue to push for privatizing as much of the government's work as they believe feasible. Senator Craig Thomas (R-WY) recently introduced the 1997 Freedom From Government Competition Act, which would require federal agencies to outsource nearly all activities that OMB sees fit. Furthermore, the bill would prohibit agencies from offering services to other agencies. While it is likely that OMB and other authorities will fight this bill, the message from Congress is clear: agencies should look to vendors to reduce costs and improve processes. Such political forces could well drive the outsourcing market beyond what is currently projected.

1.   Government-Owned, Contractor-Operated

Of the current market for federal outsourcing, GOCO services comprise approximately 75% of the total addressable opportunities, a figure projected to reach 76% by FY 2001. The GOCO professional services segment is currently expected to improve at 5% CAGR, despite expectations of data processing center consolidations in Defense and in other civilian agencies. The dislocation of federal staffs is not expected to affect adversely the laboratories and experimental centers where the largest GOCO contracts are awarded. Civilian agencies will continue to command the largest share of the GOCO market because their activities and operational requirements are less often security sensitive than those of DoD. Exhibit IV-13 reveals this trend more clearly.

Exhibit IV-13

Civilian Versus Defense Markets for GOCO Outsourcing, FY 1996–FY 2001
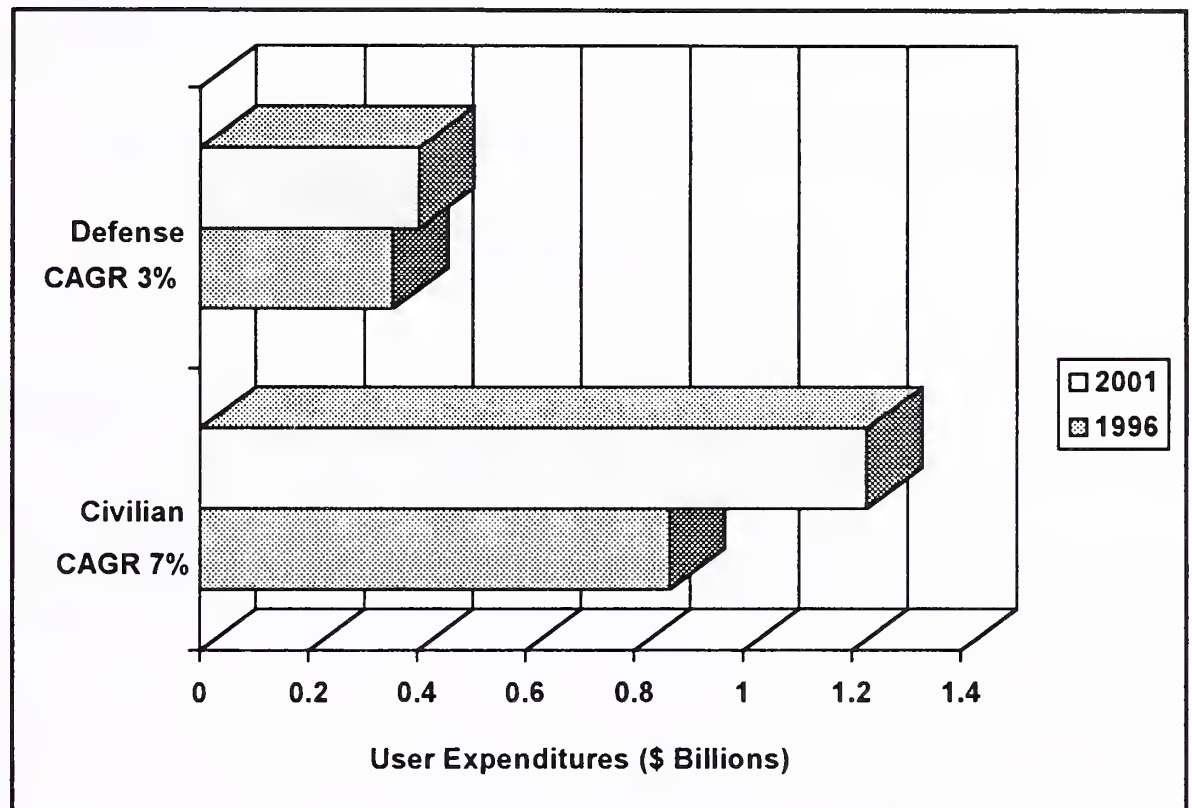
Source: INPUT

2. Contractor-Owned, Contractor-Operated

COCO opportunities are fewer in number and contract value, currently at about a third of the GOCO market. INPUT is optimistically showing a CAGR of 5% because the agencies cannot fund adequate disaster recovery facilities. Furthermore, continued federal data center consolidation is driving a number of agencies to examine outsourcing of their data centers to increase productivity at a stable and predictable cost level. Exhibit IV-14 highlights the disparity in market share and growth rates between civilian and Defense agencies, a disparity that will likely increase over the next five years.

MM12   IV-17

Exhibit IV-14

Civilian Versus Defense Markets for COCO Outsourcing, FY 1996–FY 2001
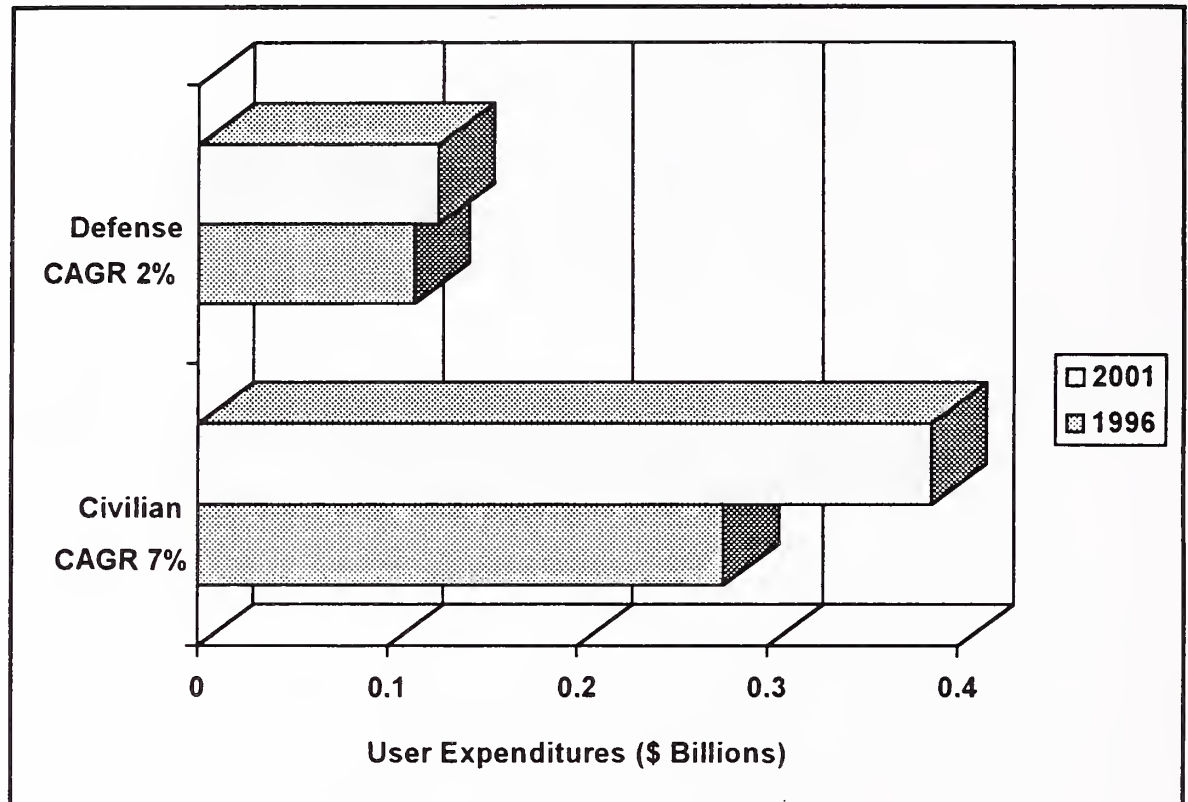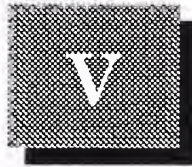
Defense
CAGR 2%

Civilian
CAGR 7%

0   0.1   0.2   0.3   0.4

User Expenditures ($ Billions)

☐ 2001
▣ 1996

MM12

V

Agency Forecast and Trends

INPUT forecasts information technology budgets by agency based on spending in obligations as reported to OMB. However, the current Circular A-11 Exhibit 43 does not require agencies to report detailed spending on professional services. Only "support services" are reported, which is defined by OMB as any commercial service, including maintenance, used in the support of equipment, software or processing and telecommunications services. To estimate current and potential future agency spending by specific professional services delivery modes, INPUT analyzes historical spending patterns by agency and considers existing and projected market trends that may affect spending on professional services. Based on these analyses, comprehensive budget forecasts and program trends are provided below for those agencies — both civilian and Defense — with leading expenditures on total professional services and specific professional services submarkets.

A

Agency Overview

While spending on all modes of professional services varies widely by agency, a common trend is the growth rate of such spending relative to the growth of the overall information technology budget of the agency. With the exception of the Department of Energy, the compound annual growth rate of total estimated professional services spending from FY 1996 to FY 2001 is at least 1% higher than the CAGR for total IT expenditures for all agencies analyzed, and more typically is almost double the rate of total funding growth. Agencies throughout the federal government are forced to do more with tightened program budgets. This fact, coupled with the advent of information technology management reform and rapid technological change, ensures that professional services will continue to lead overall IT funding because such services are fundamental in the proper and efficient use of other information resources. Exhibit V-1 highlights the disparity of CAGRs for professional services versus total IT budgets among those 10 agencies with the greatest expenditures on professional services.

Exhibit V-1

FY 1996–FY 2001 CAGR Comparison:
Professional Services Versus Total IT Budget by Agency
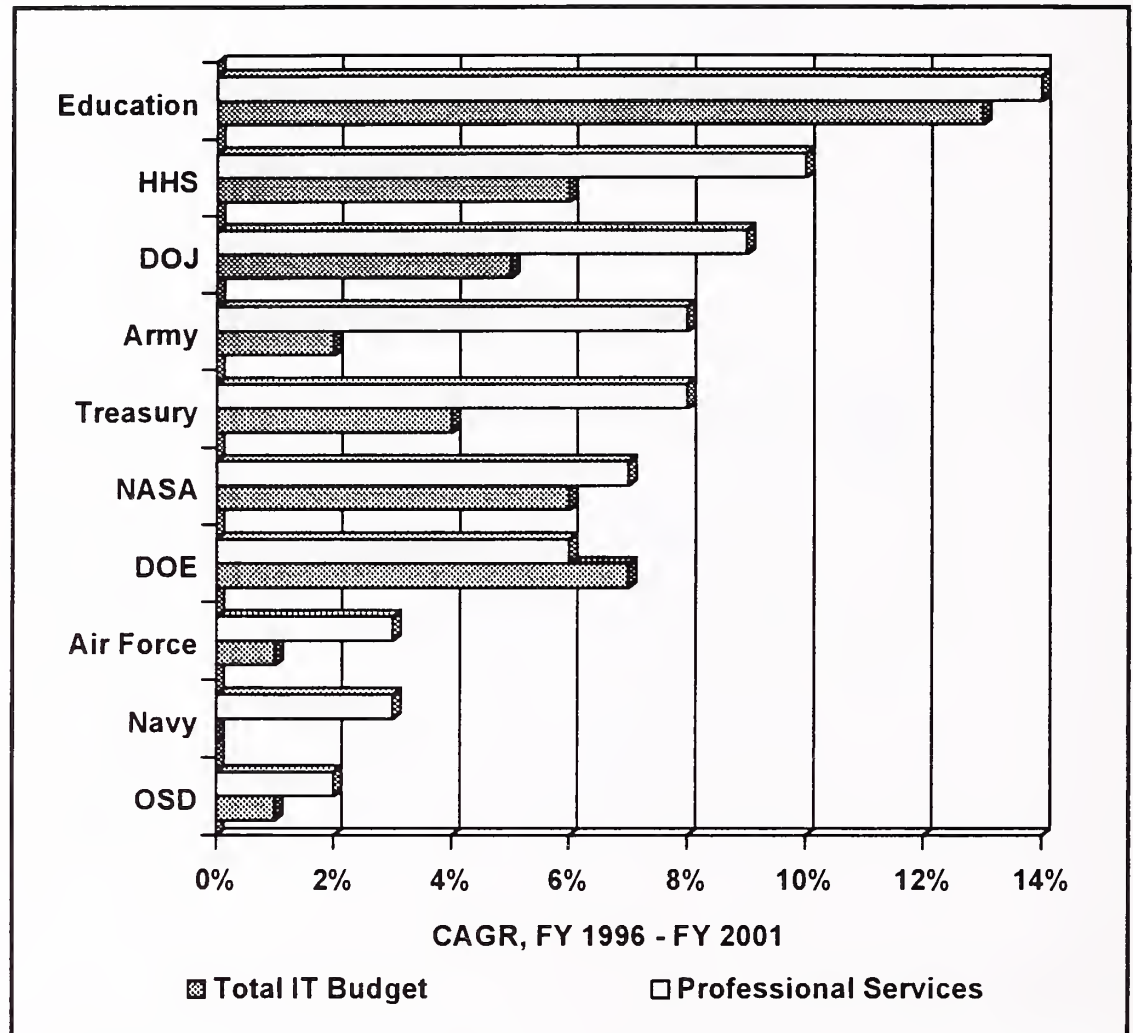
CAGR, FY 1996 - FY 2001

⊠ Total IT Budget   □ Professional Services

Also of note is the portion of the total information technology budget available to agencies that is being allocated for professional services. This figure inherently varies widely within the federal government because agency functions and missions differ, ranging from as high as an estimated 51% at the Department of Education to as low as 6% at the Department of State in FY 1996. Exhibit V-2 highlights the relative reliance on professional services among the 10 leading users of such services.

Exhibit V-2

Professional Services Share of Total IT Budget by Agency, FY 1996

Share of Total IT Budget

Source: INPUT

B
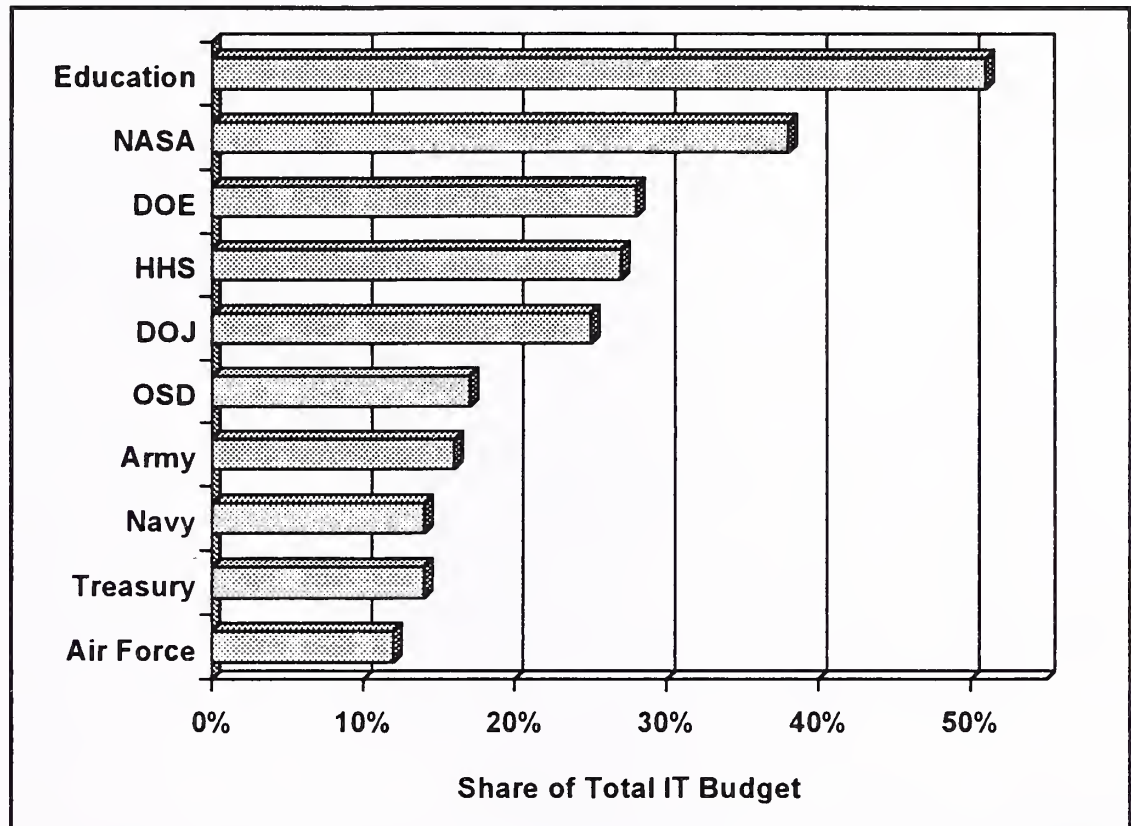
Leading Professional Services Agencies

Based on INPUT's analyses of agency budget submissions to OMB and historical spending trends, Exhibit V-3 identifies the 20 leading agencies for professional services expenditures in fiscal year 1996. GSA deserves special attention in this agency ranking because it allocated an actual $2.3 billion to commercial support services in fiscal year 1996 — more than any other federal agency. While the administration could be treated as the leading services agency, INPUT found that 97% of these commercial services expenditures have historically gone to the Federal Telecommunications Service (FTS) within GSA on an agency cost-reimbursement basis. As noted earlier, communications and telecommunications services are omitted from the data presented here. While GSA ranks 19th among the top 20 agencies for professional services correcting for FTS, the agency has a number of significant contracts in place that should not be overlooked. For example, the agency awarded the $6.0 billion FEDSIM's Data Center Services (FEDCAC 111) program

to CSC, SunGard and Unisys on February 19, 1997 for government-wide professional services. Even with the demise of GSA's central authority over IT procurement under the Clinger-Cohen Act of 1996, expect the agency to continue to serve as a central facilitator of professional services via government-wide contracts and related programs.

Exhibit V-3

Total Professional Services Spending by Agency, FY 1996

Spending in $ Millions
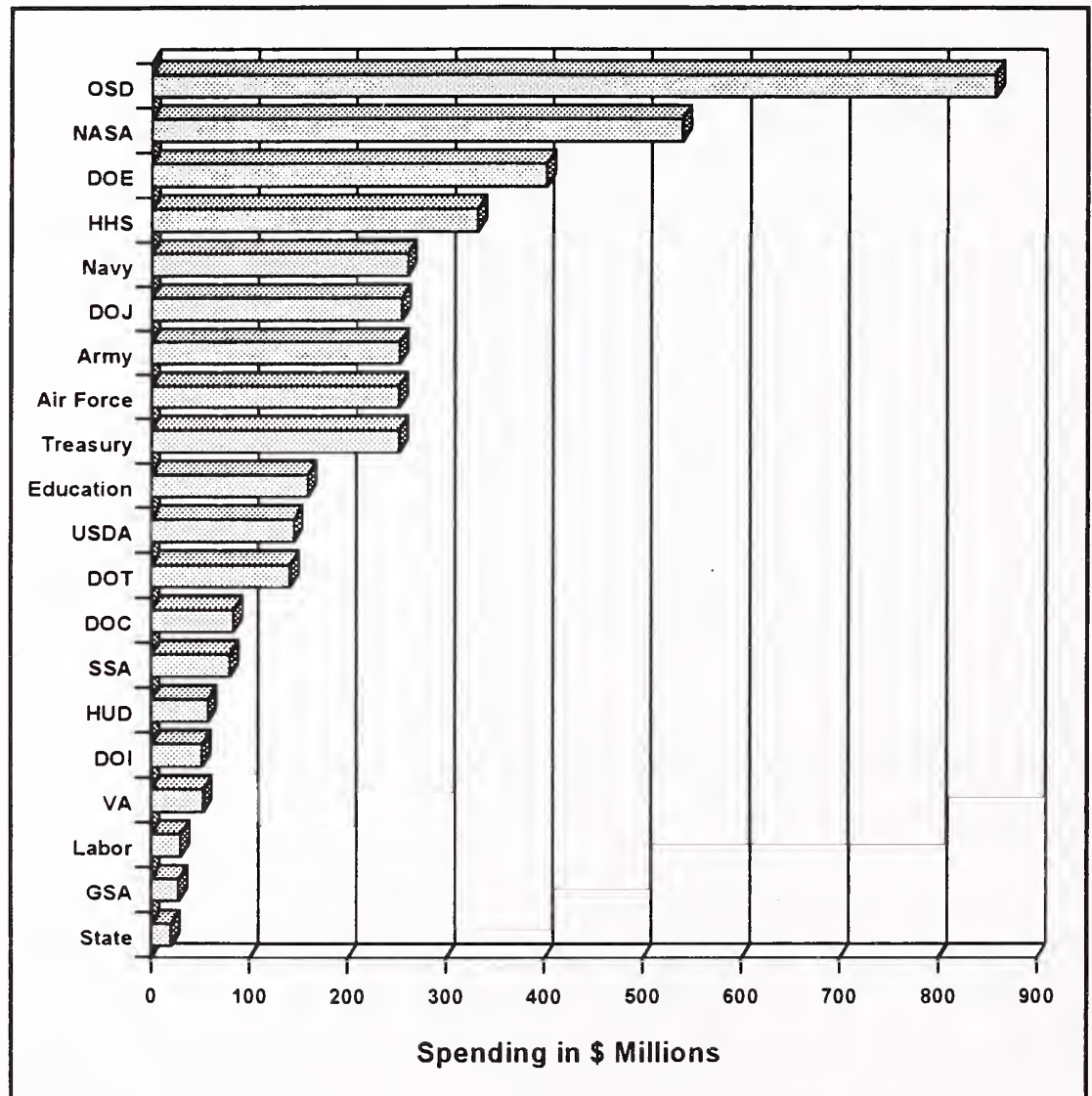
Source: INPUT

The agencies discussed in greater detail below represent the top 10 end-users of professional services in the government — a significant representation of the total federal market. The resources allocated for contractor services by these 10 agencies comprise approximately 75% of the total federal market for professional services. The following agency forecasts are presented in decreasing order of estimated total services expenditures.

1.   Office of the Secretary of Defense

Estimated spending on professional services at the Office of the Secretary of Defense (OSD) comprised 53% of the total DoD market for such services in FY 1996 at $857 million. OSD funding consists of all Defense administrative agencies' budgets (excluding the Air Force, Army, Navy and the U.S. Marine Corps), such as the Defense Information Systems Agency (DISA) and the Defense Finance and Accounting Service (DFAS), to name only two. As with other Defense agencies, growth in IT expenditures at OSD is expected to be minimal over the next five years due to continuing overall program budget reductions.

The CAGR for professional services spending is a moderate 2% from FYs 1996 to 2001, with the primary submarket growth drivers being software development, design and consulting and systems integration services. It is likely that training services will receive more funds in the near future, because Defense agencies are coming to realize that spending on IT systems is not enough without the ability to utilize them effectively. The $500 million DoD-wide Defense Message System (DMS) program with Lockheed Martin, for example, is currently being postponed because of a lack of user and operator knowledge about the new systems. Even with relatively low growth, OSD is expected to maintain the lead in professional services spending well into the next century.

Compared with the Armed Forces branch of the Department of Defense, OSD historically appropriates a higher percentage of its total IT budget for professional services, which amounted to 17% in FY 1996 and is expected to reach 18% in FY 2001. The professional services budget of the Office of the Secretary of Defense is presented in Exhibit V-4.

While many IT contracts call for some degree of professional services, OSD currently has at least 27 major contract vehicles in place that require primarily professional services. Some of the more significant existing programs follow, which have a combined potential value of $6.7 billion:

❑ *Defense Enterprise Integration Services II (DEIS II)*; awarded to BDM, Boeing Information Systems, CSC, EDS, Lockheed Martin and Unisys on 7/5/1996, expire 7/2003; value $3.0 billion

❑ *Defense Medical Information System Development, Operations and Maintenance Services (DSIDDOMS)*; awarded to AMS, EDS, Litton/PRC and SAIC on 3/17/1995, expire 3/2000; value $1.3 billion

❑ *InfoSec Technical Services Contract (CISS-ITS)*; awarded to CSC, Merdan Group and SAIC on 7/12/1995, expire 7/2000; value $1.1 billion

❑ *Battle Management Command, Control and Communications/*
    Systems Engineering and Integration (BMC3/SE&I); awarded to TRW
    on 8/24/1995, expires 8/2000; value $679 million

❑ *Joint Interoperability Engineering Organization Omnibus (JIEO);*
    awarded to ARTEL, Femme Comp, Van Dyke & Associates, Logicon
    Eagle Technology, Pragmatics, SETA, Stanley Associates and Validity
    on 1/30/1997, expire 1/2002; value $610 million

The Office of the Secretary of Defense also plans to conduct at least 22
major professional services acquisitions and recompetes, a short selection
of which follows:

❑ *DMIM Systems Integration, Design, Development, Operations and*
    Maintenance Services II (DSIDDOMS II); award expected 6/1998;
    estimated value $1.5 billion

❑ *FIP Infrastructure Services Recompete;* award expected 8/2000;
    estimated value $166 million

❑ *Modern Aids to Planning Program Enhancement Follow-On (MAPP);*
    award expected 5/1999; estimated value $94 million

❑ *DODIIS Integration and Engineering Support Contract (DIESCON);*
    award expected 2/1998; estimated value $50 million

❑ *Worldwide Management Support Services for the Defense Switched*
    Network; award expected 9/1997; estimated value $50 million

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Exhibit V-4

Professional Services Budget of the Office of the Secretary of Defense

Category	Projected Spending by FY in $ Millions						CAGR 1996-2001
	1996	1997	1998	1999	2000	2001	
Basic Professional Services	$437	$405	$425	$448	$478	$504	3%
Systems Integration	173	161	169	179	190	200	3%
Systems Operations/Outsourcing	247	226	233	241	251	265	1%
Total Professional Services	**857**	**791**	**827**	**868**	**919**	**969**	**2%**
Total IT Budget	**5,109**	**4,759**	**4,857**	**4,972**	**5,108**	**5,267**	**1%**

Source: INPUT

2. National Aeronautics and Space Administration

Despite a stagnant program budget at the National Aeronautics and Space Administration (NASA) over the last several years, the agency will continue to rely heavily on information technology to support its high-tech missions and major space center field operations. NASA allocated approximately $539 million to professional services in fiscal year 1996, a figure which is anticipated to grow an average of 7% annually to $772 million in FY 2001. Of particular note is the large portion of the total IT budget allocated to professional services. In FY 1996, such services comprised 38% of NASA's total IT budget and will likely comprise 41% in FY 2001 — led only by the Department of Education. As with most federal agencies, basic services and systems integration services are the market drivers at NASA, both with a CAGR of 8% over the next several years. Exhibit V-5 details the projected professional services budget of the National Aeronautics and Space Administration.

NASA currently has at least 34 major professional services contract vehicles in place. Some of the more significant existing programs follow, which have a combined potential value of $6.4 billion:

❑ *Engineering Test and Analysis Support Contract (ETA);* awarded to Lockheed Martin on 12/23/1993, expires 12/2003; value $2.8 billion

❑ *Base Operations Support;* awarded to EG&G on 10/29/1993, expires 10/2003; value $1.8 billion

❑ *Program Information Systems Mission Services (PRISMS);* awarded to CSC on 5/3/1994, expires 5/2002; value $1.0 billion

❑ *Training Systems Center (TSC);* awarded to CAE-Link on 10/24/1989, expires 10/1999; value $517 million

❑ *Safety, Reliability, Maintainability and Quality Assurance (SRMQA);* awarded to Lockheed Martin on 4/1/1995, expires 4/2005; value $279 million

NASA also intends to conduct at least 13 major professional services acquisitions, a short selection of which follows:

❑ *Training Systems Center (TSC);* award expected 10/1999; estimated value $600 million

❑ *Consolidated Space Operations Contract (CSOC);* award for Phase I expected 5/1997 and Phase II award expected 5/1998; estimated value $500 million

❑ *White Sands Test Facility Site Support;* award expected 10/1998; estimated value $160 million

❑ *Management and Operations Contract (MOC-I);* award of program currently on hold indefinitely; estimated value $150 million

❑ *Mission Operations, Systems Engineering and Software (MOSES);* award expected 7/1999; estimated value $124 million

Exhibit V-5

Professional Services Budget of the National Aeronautics and Space Administration

Category	Projected Spending by FY in $ Millions						CAGR 1996-2001
	1996	1997	1998	1999	2000	2001	
Basic Professional Services	$275	$270	$294	$323	$361	$401	8%
Systems Integration	109	107	117	129	144	159	8%
Systems Operations/Outsourcing	156	150	161	174	190	211	6%
Total Professional Services	539	528	572	627	695	772	7%
Total IT Budget	1,432	1,409	1,495	1,600	1,728	1,884	6%

Source: INPUT

3.   Department of Energy

It is estimated that the Department of Energy (DOE) allocated $401 million for professional services in fiscal year 1996, a figure which will likely grow an average of 6% annually over the next several years. As the department's overall federal funding continues to decline at an average of 3% from 1994 to 1997, it will rely more heavily on vendors to fulfill its professional services requirements. Outsourcing and systems operations have historically comprised a large portion of the total professional services budget at DOE relative to other federal agencies, at 35% in FY 1996, a trend that will continue over the next five years. The professional services budget forecast for the Department of Energy is presented in Exhibit V-6.

DOE currently has at least 12 major professional services contract vehicles in place. Some of the more significant existing programs are given below. The listed contracts alone have a combined life-time value of $541 million.

❑ *Information Resources Management Support Services (IRM-SS);* awarded to DynCorp on 3/1/1995, expires 11/1999; value $246 million

❑ *ADP and Telecommunications Support Services;* awarded to DynCorp on 4/22/1994, expires 4/1999; value $227 million

❑ *IRM Technical Support Services;* awarded to SAIC on 7/31/1995, expires 7/2000; value $29 million

❑ *Energy Information Administration Facilities Management (EIAFM);* awarded to Unisys on 5/21/1993, expires 5/1998; value $20 million

❑ *Federal Information Processing Support Services;* awarded to Software Control International on 8/29/1996, expires 8/2001; value $19 million

The Department of Energy has at least seven major professional services contract requirements, a short selection of which follows:

❑ *Information Resources Management Support Services (IRM-SS);* award expected 11/1999; estimated value $246 million

❑ *Technical Support Services;* award expected 8/1997; estimated value $40 million

❑ *Non-Personal Technical and Management Services;* award expected 2/1999; estimated value $34 million

❑ *Analysis of Energy Data Collections;* award expected 5/1999; estimated value $12 million

Exhibit V-6

Professional Services Budget of the Department of Energy

Category	Projected Spending by FY in $ Millions						CAGR 1996-2001
	1996	1997	1998	1999	2000	2001	
Basic Professional Services	$185	$194	$207	$220	$236	$253	6%
Systems Integration	78	82	87	93	99	106	6%
Systems Operations/Outsourcing	139	147	155	163	173	183	6%
Total Professional Services	401	423	448	475	508	542	6%
Total IT Budget	1,446	1,514	1,602	1,709	1,840	2,000	7%

Source: INPUT

4. Department of Health and Human Services

The fourth largest user of professional services in the federal government, the Department of Health and Human Services (HHS) allocated an estimated $332 million for basic services, systems integration services and systems operations in FY 1996. This market is projected to have the second highest CAGR of all agencies from FY 1996 to FY 2001 at 10%. With an increased focus on improving its services to the public, HHS spends heavily on software development, systems integration and facilities management of government-owned systems centers and laboratories. The department, notably through the National Institutes of Health (NIH), is also setting the pace for federal agencies in simplified acquisitions under the recently enacted Clinger-Cohen Act of procurement regulations. Several major indefinite delivery, indefinite quantity (IDIQ) and multiple award contracts have been awarded at HHS for training resources, technology support and user services — all of which will continue to drive professional services spending. Exhibit V-7 provides the professional services budget forecast of the Department of Health and Human Services.

HHS currently has at least 34 major professional services contract vehicles in place. Some of the more significant programs follow, which have a combined potential life-time value of $1.8 billion:

❑ *Strategic Information Systems Technical Integration Resources (SISTIR);* awarded to Battelle, BDM, Booz-Allen & Hamilton, PSI and SRA on 3/27/1997, expire 3/2004; value $1.0 billion

❑ *CERTAN - NIH Information Technology Support Services (NITSS);* awarded to SRA and SAIC on 11/27/1996, expire 11/2001; value $299 million

❑ *CDC Information Systems Support Services (CISSS);* awarded to TRW on 9/30/1996, expires 9/2001; value $243 million

❑ *Management and Operation of the NCI Frederick Cancer R&D Center;* awarded to SAIC on 2/24/1995, expires 2/2002; value $115 million

❑ *Chief Information Officer Solutions and Partners (CIOSP);* awarded to Andersen Consulting, Boeing, Cordant, CSC, Digicon, EDS, GTE, I-Net, Intermetrics, ISSC/IBM, Logicon, Northrop Grumman, OAO Corporation, Orkand, SAIC, SRA, Skytel, Universal High-Tech Development and Unisys on 8/28/1996, expire 8/2001; value $100 million

❑ *Training Resources, User Services and Technology Support (TRUST);* awarded to Booz-Allen & Hamilton on 8/9/1996, expires 8/2003; value $65 million

Health and Human Services also intends to conduct at least 10 major professional services acquisitions, a short selection of which follows:

❑ *Medicare Transaction System Operating Site (MTSOS)*; award expected 9/1997; estimated value $100 million

❑ *HCFA Data Center Facility Management Services Recompete (FMS)*; award expected 7/2000; estimated value $60 million

❑ *Network/Personal Computer Support Services Recompete (NPCS)*; award expected 9/1998; estimated value $12 million

❑ *CDC NCHSTP Information Services*; award expected 9/1997; estimated value $6 million

Exhibit V-7

Professional Services Budget of the Department of Health and Human Services

Category	Projected Spending by FY in $ Millions						CAGR 1996–2001
	1996	1997	1998	1999	2000	2001	
Basic Professional Services	$169	$185	$202	$222	$248	$275	10%
Systems Integration	67	73	80	88	98	109	10%
Systems Operations/Outsourcing	96	103	110	119	130	145	9%
Total Professional Services	**332**	**361**	**392**	**429**	**476**	**529**	**10%**
Total IT Budget	**1,211**	**1,288**	**1,343**	**1,408**	**1,488**	**1,586**	**6%**

Source: INPUT

5. Department of the Navy

The Department of the Navy, including the U.S. Marine Corps, apportioned approximately $261 million to professional services vendors in FY 1996, a figure anticipated to grow at a moderate compound annual rate of 3% to $300 million in FY 2001. Although the total information technology budget at the Navy is expected to witness very little growth over the next five years, the department will continue to rely on basic professional services. Software development and systems integration have typically been the primary services required by the Navy, while the simplification of regulations governing the purchase of commercial off-the-shelf items will undoubtedly impede strong growth in these market segments. Based on recent acquisition practices, however, professional services will likely be a steady market at the agency.

The recent decision of the Naval Information Systems Management Center (NISMC) to pull back its planned $850 million Information Technology Support Services (ITSS) acquisition in favor of multiple blanket purchase agreements (BPAs) represents a significant trend in the federal market. BPAs, contractor team arrangements and the increased use of GSA's Federal Supply Schedules for professional services are all signs of a new agency focus — streamlining, doing more with less, discount pricing and responsibility and accountability for effective IT management and execution. These factors will foster continued growth of professional services within the Navy, regardless of its stagnant total IT budget. The professional services budget for the Department of the Navy is presented in Exhibit V-8.

The Navy currently has at least 54 major contract vehicles in place with professional services as a substantial deliverable. While this is one of the highest number of contracts for a single agency, Navy contract requirements are less often solely for professional services than many other agencies, notably civilian agencies. Of the more significant existing programs, those listed below have a combined value of $2.9 billion:

❏ *Automated Information Support - AEGIS Combat System Center (AIS-ACSC);* awarded to Litton/PRC on 1/3/1997, expires 1/2002; value $2.0 billion

❏ *Advanced Distributed Simulation Technology II (ADST II);* awarded to Lockheed Martin on 10/23/1995, expires 10/2000; value $500 million

❏ *Inventory Control Points Resolicitation (ICP II);* awarded to Federal Data Corporation and Pacific Corporation on 9/16/1992, expire 9/1997; value $150 million

❏ *Scientific and Engineering Support Services (SESS);* awarded to Boeing on 3/4/1997, expires 3/2003; value $91 million

❏ *Weapons Systems Software Activity (WSSA);* awarded to EER Systems on 2/1/1996, expires 2/2001; value $89 million

❏ *Integrated Undersea Surveillance Systems Logistic Support Facility (SE&I);* awarded to TRW on 9/29/1995, expires 9/2000; value $68 million

A short selection of the Navy's 38 intended professional services acquisitions follows:

❑ *Information Technology Support Services (ITSS)*; BPAs to be awarded beginning 3/1997; estimated value $850 million

❑ *Engineering Services in Support of Air Traffic Control Systems*; award expected 10/2000; estimated value $670 million

❑ *AEGIS Test and Evaluation Support Recompete*; award expected 9/1997; estimated value $170 million

Exhibit V-8

Professional Services Budget of the Department of the Navy [†]

Category	Projected Spending by FY in $ Millions						CAGR 1996-2001
	1996	1997	1998	1999	2000	2001	
Basic Professional Services	$133	$125	$131	$138	$147	$156	3%
Systems Integration	53	50	52	53	56	62	3%
Systems Operations/Outsourcing	75	70	72	75	78	82	2%
Total Professional Services	261	245	255	266	281	300	3%
Total IT Budget	1,898	1,864	1,878	1,893	1,911	1,945	-%

[†] Includes U.S. Marine Corps Spending   *Source: INPUT*

6.   Department of Justice

Professional services expenditures at the Department of Justice (DOJ) are anticipated to experience a strong compound annual growth rate of 9% from FY 1996 to FY 2001, rising from $255 million to $388 million, respectively. This rate of growth represents the third highest increase in vendor services spending by agency over this time period, with only Education and HHS outpacing DOJ. Justice relies heavily on software development services, systems integration and GOCO facilities, for which the department allocated $82 million, $51 million and $56 million in FY 1996, respectively. These service delivery modes alone comprise 74% of DOJ's professional services budget. Also of note is the relative increase of spending on services relative to Justice's overall IT budget. In FY 1996, professional services accounted for 25% of the department's total information technology budget and will account for 29% in FY 2001. The professional services budget of the Department of Justice is presented in Exhibit V-9.

The Justice Department currently has 19 major professional services contract vehicles in place. A brief selection of programs follows, which have a total life-time value of $2.6 billion:

❑ *Information Technology Support Services (ITSS);* awarded to Logicon Syscon, ManTech, Vitro Corporation, Keane Federal Systems, CACI, DynCorp, BDM and Antion (Ogden) on 9/9/1996, expire 9/2001; value $878 million

❑ *Justice Consolidated Office Network System Integration (JCON SI);* awarded to GTE on 3/8/1996, expires 3/2003; value $500 million

❑ *Litigation Support Services (LSUP);* awarded to Aspen Systems, Acumenics and CACI on 2/1/1993, expire 2/1998; value $450 million

❑ *INS Service Centers Services;* awarded to Labat-Anderson on 4/6/1995, expires 4/2000; value $443 million

❑ *MEGA I Automated Litigation Support Services;* awarded to Aspen Systems, CACI, DynCorp and Rust Federal Systems on 11/22/1996, expire 11/2001; value $375 million

The Department of Justice is also in the process of conducting at least 10 major professional services acquisitions, a short selection of which follows:

❑ *Service Technology Alliance Resources (STARS);* award expected 8/1999; estimated value $300 million

❑ *MEGA II;* award expected 4/1998; estimated value $75 million

❑ *ADP Technical Support Services;* award expected 3/1997; estimated value $45 million

❑ *Verification Information System Acquisition (VIS);* award expected 4/1997; estimated value $32 million

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Exhibit V-9

Professional Services Budget of the Department of Justice

Category	Projected Spending by FY in $ Millions						CAGR 1996-2001
	1996	1997	1998	1999	2000	2001	
Basic Professional Services	$130	$136	$148	$163	$182	$202	9%
Systems Integration	51	54	59	65	72	80	9%
Systems Operations/Outsourcing	74	76	81	88	96	106	8%
Total Professional Services	255	266	288	316	350	388	9%
Total IT Budget	1,030	1,049	1,098	1,157	1,229	1,318	5%

Source: INPUT

7. Department of the Army

The Department of the Army is the seventh largest user of professional services within the federal government, having allocated roughly $253 million for such contractor services in fiscal year 1996. This figure is expected to reach $376 million in FY 2001 at a CAGR of 8% — a particularly high growth rate among Defense agencies. The Army's expenditures on contractor services accounted for 16% of the total Defense market for professional services in FY 1996 and is expected to account for just under 20% in FY 2001 — a rising share of a rising budget. Basic professional services alone comprised 53% of the department's total professional services budget in FY 1996, of which 64% — or $82 million — was allocated for software development services. The Army's information technology budget overall is likely to witness a moderate compound annual growth rate of 2% over the next several years, despite an ongoing decline in federal funds since the creation of the Defense Secretary's Commission on Base Realignment and Closure (BRAC) in 1988. Exhibit V-10 details the professional services budget of the Department of the Army.

The Army currently has at least 43 major primary professional services contract vehicles in place. Five of the more significant existing programs follow, which have a combined value of $3.6 billion over the life of the contracts:

❑ *Reserve Component Automation System (RCAS);* awarded to Boeing on 9/27/1991, expires 9/2003; value $1.6 billion

❑ *Sustaining Base Information Services (SBIS);* awarded to Lockheed Martin on 6/24/1993, expires 6/2003; value $750 million

❑ *SETA Research and Development*; awarded to Mevatec, Nichols Research, CSC and Teledyne Brown Engineering on 12/18/1996, expire 12/2001; value $740 million

❑ *Command, Control and Communications Technology, Engineering and Integration Support Services (C3I TE&I)*; awarded to CSC on 3/20/1996, expires 3/2001; value $371 million

❑ *Army Global Command and Control System (AGCCS);* awarded to Lockheed Martin on 12/23/94, expires 12/1999; value $167 million

The Army is also in the process of conducting at least 28 major professional services acquisitions, a short selection of which follows:

❑ *Information Mission Area Support (IMA);* award expected 11/2000; estimated value $155 million

❑ *Systems Engineering and Technical Assistance (SETA);* award expected 5/1997; estimated value $150 million

❑ *Information Mission Area Support Services (IMA);* award expected 7/1997; estimated value $120 million

❑ *Professional, Administrative and Management Support Services;* award expected 12/2000; estimated value $110 million

❑ *Joint Recruiting Information Support System (JRISS);* award expected 12/1997; estimated value $100 million

Exhibit V-10

Professional Services Budget of the Department of the Army

Category	Projected Spending by FY in $ Millions						CAGR 1996-2001
	1996	1997	1998	1999	2000	2001	
Basic Professional Services	$129	$157	$165	$174	$185	$195	9%
Systems Integration	51	62	66	69	74	78	9%
Systems Operations/Outsourcing	73	87	90	94	98	103	7%
Total Professional Services	**253**	**307**	**321**	**337**	**356**	**376**	**8%**
Total IT Budget	**1,603**	**1,676**	**1,700**	**1,727**	**1,758**	**1,793**	**2%**

Source: INPUT

8. Department of the Air Force

The professional services budget of the Department of the Air Force is expected to maintain a moderate CAGR of 3% over the next five years, from $251 million in FY 1996 to $291 million in FY 2001. Conversely, the department's overall spending on information technology is anticipated to increase only 1% over the same time period, primarily because of the significant stagnating effect of a 3% annual reduction in systems staff on a nationwide basis. The Air Force historically projects and reports fewer resources for commercial services to OMB than it actually spends, which explains the derived 6% reduction in estimated spending on professional services from FY 1996 to FY 1997. Professional services comprised approximately 12% of the department's total IT budget in FY 1996 and

will likely comprise 14% of the total IT budget in FY 2001. The professional services budget of the Department of the Air Force is presented in Exhibit V-11.

While many IT contracts call for some degree of professional services, the Department of the Air Force currently has at least 23 major contract vehicles in place that require primarily professional services. Some of the more significant existing programs are listed below. These programs alone total $2.8 billion if all respective option years are exercised.

- *Global Combat Support System - Air Force (GCSS-AF)*; awarded to Lockheed Martin on 8/15/1996, expires 8/2001; value $900 million

- *Test Range Support*; awarded to CSC on 4/23/1992, expires 4/2000; value $575 million

- *SOF Support Services Contract (SSSC)*; awarded to Modern Tech Corp., Agordit and Support Systems Associates, Inc. on 3/26/1997, expire 3/2002; value $570 million

- *National Testbed Facility - Operation and Maintenance (NTF)*; awarded to TRW and Lockheed Martin on 10/27/1994, expire 10/1997 and 10/2001, respectively; value $300 million

- *Space Systems Acquisition Support II (SSAS II)*; awarded to Anacomp, BD Systems and Litton/PRC on 5/5/1995, expire 5/2000; value $300 million

- *Range Technical Services (RTS)*; awarded to CSC and Raytheon on 6/29/1993, expire 6/1998; value $196 million

The Air Force is also in the process of conducting a minimum of nine major professional services acquisitions, a short selection of which follows:

- *Engineering and Technical Support Services*; award expected 4/2000; estimated value $575 million

- *Technical/Management Support for ASC*; award expected 12/1997; estimated value $400 million

- *Computing Environment STRATCOM Architecture (CESAR)*; award expected 1/1998; estimated value $350 million

- *C4I2SR Engineering and Technical Support Services*; award expected 9/1997; estimated value $100 million

Exhibit V-11

Professional Services Budget of the Department of the Air Force

Category	Projected Spending by FY in $ Millions						CAGR 1996-2001
	1996	1997	1998	1999	2000	2001	
Basic Professional Services	$128	$121	$127	$134	$143	$151	3%
Systems Integration	51	48	51	54	57	60	3%
Systems Operations/Outsourcing	73	68	70	72	75	80	2%
Total Professional Services	251	237	248	260	276	291	3%
Total IT Budget	2,033	2,086	2,091	2,091	2,090	2,087	1%

Source: INPUT

9. Department of the Treasury

Professional services spending at the Department of the Treasury is anticipated to experience a CAGR of 8% from FY 1996 to FY 2001, double that of its total information technology budget. As the ninth largest user of contractor services in the federal government in FY 1996, Treasury will continue to command a large share of the total professional services market. Several factors and recent trends at the agency solidify its position in the market. First, Congress and the General Accounting Office continue to stress the "critical need" to improve business operations and rectify ongoing technical and management problems, notably at the Internal Revenue Service. As a result, the 1996 Treasury-Postal Service appropriation bill mandated the creation of the National Commission on Restructuring the Internal Revenue Service. In the near term, restructuring and business process re-engineering at the department will demand greater resources for design and consulting, education and training, as well as systems integration. If effectively implemented, however, BPR may curtail services spending in the outyears. Furthermore, the department is currently in the process of studying the feasibility of outsourcing most of its returns processing by the year 2001 — further generating demand for professional services. The professional services budget of the Department of the Treasury is presented in Exhibit V-12.

Treasury currently has eight major professional services contract vehicles in place. Totaling $1.2 billion, the following selection represents some of the more significant existing programs:

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❑ *Treasury Information Processing Support Services (TIPSS)*; awarded to Andersen Consulting, Booz-Allen & Hamilton, CSC, CTS, Dynamics Research Corporation, DynCorp, IMC, Logicon Eagle Technology, MSD, Northrop Grumman, SAIC, SRA, Unisys and Vector Research on 6/21/1996, expire 6/2001; value $900 million

❑ *Integration Support Contract (ISC)*; awarded to TRW on 12/11/1991, expires 12/2001; value $300 million

❑ *Data Center Facilities Management*; awarded to Advanced Management on 9/12/1994, expires 9/1999; value $24 million

❑ *Government On-Line Accounting Link System (GOALS)*; awarded to Lockheed Martin on 10/7/1994, expires 10/1999; value $16 million

The Department of the Treasury is also in the process of conducting at least four professional services acquisitions, as listed below:

❑ *Data Center Facilities Management Recompete*; award expected 7/1999; estimated value $23 million

❑ *Information Engineering*; award expected 9/1997; estimated value $5 million

❑ *Database Administration, Management and Support Services*; award expected 4/1997; value unknown

❑ *Assets Information Management System*; protest to be resolved 3/1997; value unknown

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Exhibit V-12

Professional Services Budget of the Department of the Treasury

Category	Projected Spending by FY in $ Millions						CAGR 1996-2001
	1996	1997	1998	1999	2000	2001	
Basic Professional Services	$128	$132	$144	$158	$177	$196	9%
Systems Integration	51	52	57	63	70	78	9%
Systems Operations/Outsourcing	73	74	79	85	93	103	7%
Total Professional Services	**251**	**258**	**280**	**307**	**340**	**377**	**8%**
Total IT Budget	**1,840**	**1,982**	**2,032**	**2,090**	**2,161**	**2,251**	**4%**

Source: INPUT

10. Department of Education

It is estimated that the Department of Education allocated $158 million for professional services in fiscal year 1996. While this figure is substantially lower than the other agencies ranking among the top 10, several notable trends are present at Education. First, estimated professional services expenditures at the agency accounted for a relatively high 51% of its total IT budget in FY 1996 and is expected to comprise roughly 55% of the total IT budget in FY 2001 — a growing share of a rapidly growing budget. Anticipated growth in Education's obligations for professional services and information technology overall is also of note. These particular market segments are expected to grow an average of 14% and 13% annually over the period shown, respectively. Total federal funding for Education, conversely, witnessed a 7% decline from FY 1995 to FY 1997 because of cuts in post-secondary education activities from $14.4 billion to $11.1 billion, respectively. IT expenditures will continue to grow at the department because of a shift in federal funding toward educational research and improvement activities, which received $468 million in federal funds for FY 1995 and is expected to receive $745 million in FY 1997.

Driving the market for professional services will be software development, design and consulting and education and training services, collectively accounting for 51% of total services spending in FY 1996 at $81 million. This figure alone will likely experience a CAGR of 15%. Projected expenditures on professional services at the Department of Education are provided in Exhibit V-13.

The Department of Education currently has at least seven major professional services contract vehicles in place. The programs highlighted below have a combined potential life-time value of $474 million:

❑ *Pell Grant Recipient and Financial Management System (PGRFMS)*; awarded to Litton/PRC on 9/1/1992, expires 9/1997; value $20 million

❑ *Federal Direct Student Loan Program System (FDSLS)*; awarded to CDSI on 12/21/1993, expires 12/2000; value $376 million

❑ *Educational Resources Information Center Facility Contract (ERIC)*; awarded to CSC on 6/15/1994, expires 6/1999; value $52 million

❑ *Computer Support Services*; awarded to Computer Business Methods, Pinkerton Computer Consultants and CSC on 2/28/1995, expire 2/2000; value $26 million

Education is also in the process of acquiring and recompeting at least seven additional professional services contracts, a brief selection of which follows:

- ❑ *Dissemination and Evaluation for Promising and Exemplary Programs*; award expected 12/1997; value unknown

- ❑ *National Student Loan Data System (NSLDS);* award expected 10/1997; estimated value $40 million

- ❑ *Pell Grant Recipient and Financial Management System (PGRFMS)*; award expected 4/1997; estimated value $30 million

- ❑ *Guaranteed Student Loan/Perkins Data Services (GSL);* award expected 7/2000; estimated value $90 million

Exhibit V-13

Professional Services Budget of the Department of Education

Category	Projected Spending by FY in $ Millions						CAGR 1996-2001
	1996	1997	1998	1999	2000	2001	
Basic Professional Services	$81	$108	$117	$129	$144	$160	15%
Systems Integration	32	43	47	51	57	63	15%
Systems Operations/Outsourcing	46	60	64	69	76	84	13%
Total Professional Services	158	210	228	250	277	308	14%
Total IT Budget	308	399	427	462	504	555	13%

Source: INPUT

C

Agency Market Segments

In this section, agency spending trends by professional services submarkets are explored and forecasted. The three professional services market tiers — basic professional services, systems integration and systems operations/outsourcing — are further broken down to offer an in-depth look at how leading agencies will allocate contract dollars on professional services. As explained in the previous chapter, basic professional services market segments are conceptualized as three key delivery modes: design and consulting services, software development and education and training. While systems integration encompasses a host of submarkets, such as hardware systems and software products, systems integration professional services is defined here as a separate market segment. Systems operations and outsourcing are further broken down into COCO and GOCO submarkets.

Historical and projected spending trends of these market segments reveal that five agencies — OSD, NASA, DOE, HHS and the Navy — command

the greatest market share in each. These five agencies also represented the leading overall users of contractor services in fiscal year 1996 and taken together, they comprised almost half of the total federal market for professional services, as highlighted in Exhibit V-14.

Exhibit V-14

Professional Services Market Share by Agency, FY 1996

Total Professional Services
Market = $5.5 Billion
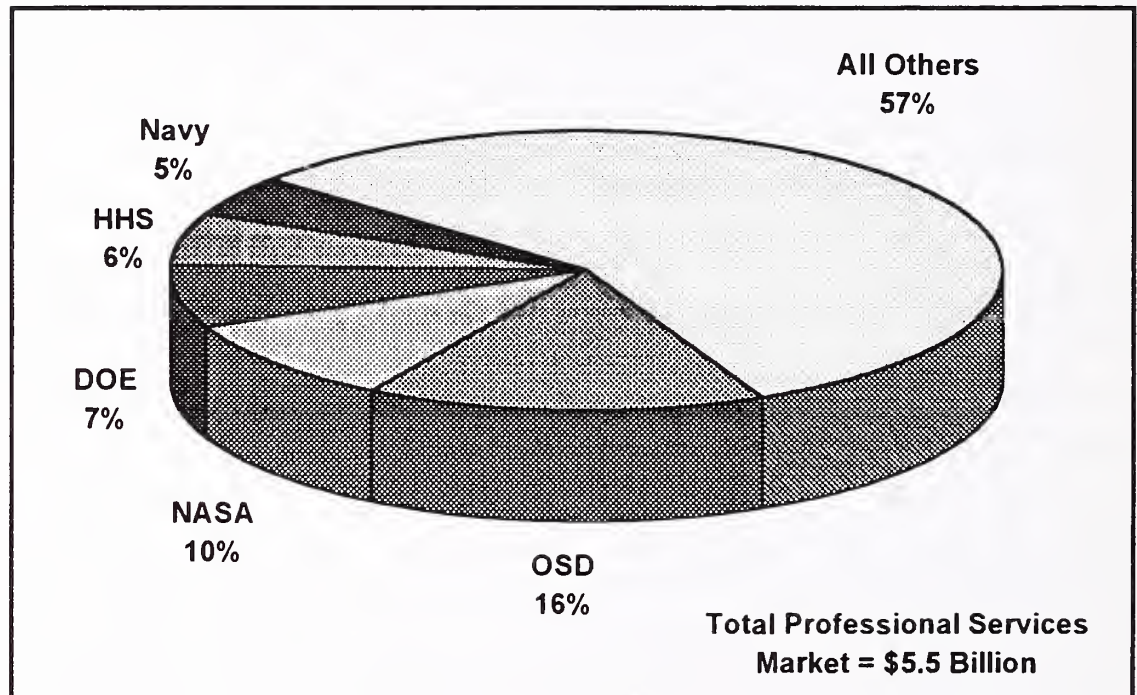
Source: INPUT

1.   Basic Professional Services

As discussed in the previous chapter, basic professional services accounted for 51% of the total federal market for professional contractor services in fiscal year 1996 — with civilian and Defense expenditures totaling $2.8 billion. This market is projected to sustain a 7% CAGR to reach $3.9 billion in FY 2001, or 52% of the total projected professional services market for that year. Expenditures at OSD, NASA, Energy, HHS and the Navy alone comprised 42% of this market in FY 1996. At each of these agencies, software development, design and consulting, as well as education and training services will account for almost half of total professional services spending over the next five years. Exhibit V-15 provides a detailed five-year budget forecast for these basic professional services submarkets at each of the five leading agencies for such services.

Exhibit V-15

Top Five Agency Budgets for Basic Professional Services

Category	Projected Spending by FY in $ Millions						CAGR 1996-2001
	1996	1997	1998	1999	2000	2001	
Office of the Secretary of Defense:							
Software Development	$277	$257	$271	$286	$307	$324	3%
Design and Consulting	87	81	85	89	94	100	3%
Education and Training	74	67	70	72	76	80	2%
Total Basic Professional Services	**437**	**405**	**425**	**448**	**478**	**504**	**3%**
NASA:							
Software Development	174	172	187	207	233	258	8%
Design and Consulting	55	54	59	64	71	79	8%
Education and Training	46	45	48	52	57	64	7%
Total Basic Professional Services	**275**	**270**	**294**	**323**	**361**	**401**	**8%**
Energy:							
Software Development	127	134	142	152	164	175	7%
Design and Consulting	36	38	41	43	46	50	6%
Education and Training	21	22	23	25	26	28	6%
Total Basic Professional Services	**185**	**194**	**207**	**220**	**236**	**253**	**6%**
Health and Human Services:							
Software Development	107	118	128	142	159	177	11%
Design and Consulting	34	37	40	44	49	54	10%
Education and Training	28	31	33	36	39	44	9%
Total Basic Professional Services	**169**	**185**	**202**	**222**	**248**	**275**	**10%**
Navy:							
Software Development	84	79	84	88	95	100	4%
Design and Consulting	27	25	26	28	29	31	3%
Education and Training	22	21	22	22	23	25	3%
Total Basic Professional Services	**133**	**125**	**131**	**138**	**147**	**156**	**3%**
Total Top Five Agencies	**1,199**	**1,179**	**1,259**	**1,351**	**1,470**	**1,589**	**6%**
All Other, Civilian and Defense	**1,624**	**1,700**	**1,817**	**1,959**	**2,116**	**2,293**	**7%**
Total Federal Market	**2,823**	**2,879**	**3,076**	**3,310**	**3,586**	**3,882**	**7%**

Source: INPUT

a. Software Development

A more detailed analysis of basic services market segments reveals that software development — including systems design, contract or custom programming, code conversion, independent verification and validation (IV&V), benchmarking and software development — commands the largest single share of all market segments within professional services, at 31% of the total market in FY 1996. This submarket also comprised the largest share of basic professional services expenditures within most federal agencies. Software development spending at the Office of the Secretary of Defense, for example, reached approximately $277 million in fiscal year 1996 and is projected to grow to $324 million in FY 2001 at a CAGR of 3%. These figures respectively represent 63% and 64% of total basic professional services spending at OSD. Exhibit V-16 reveals approximately the same distribution of basic professional services spending at the five leading agencies for such services.

b. Design and Consulting

Design and consulting services are defined as information systems and/or services (ISS) management consulting, technical and management program assistance, feasibility analysis and cost/effectiveness trade-off studies. These services comprised the second largest share of allocated funds for basic professional services in FY 1996. While OSD is the lead user of consulting services within the federal government, the Departments of Labor, Education and Housing and Urban Development are expected to experience the highest growth rates for contracting out IT consulting dollars over the next five years at 15% to 16% annually. Detailed projections for design and consulting spending among leading net end-users are provided in Exhibit V-15.

c. Education and Training

Education and training services include products and/or services related to ISS for the user, including computed-aided instruction (CAI), computer-based education (CBE) and vendor instruction of user personnel in operations, programming and maintenance. Although growing at the lowest rate and comprising the smallest share of basic professional services spending at each of the agencies detailed in Exhibits V-15 and V-16, education and training services will continue to be a strong market in the federal government. The greatest vendor opportunity for these professional services is at OSD, which is estimated to have allocated $74 million to education and training in FY 1996 and is projected to allocate $80 million in FY 2001. HHS spent a relatively low $28 million in this market segment during FY 1996, though this market is anticipated to grow at a high CAGR of 9% over the next several years. Conversely, continued reductions in personnel and overall federal funding will keep annual growth of the education and training market at the Office of the

Secretary of Defense to a relatively low 2%. The increasing loss of knowledgeable personnel to the private sector, conversely, could drive this market upward in the long term.

Exhibit V-16

Agency Spending by Basic Professional Services Market Segment, FY 1996
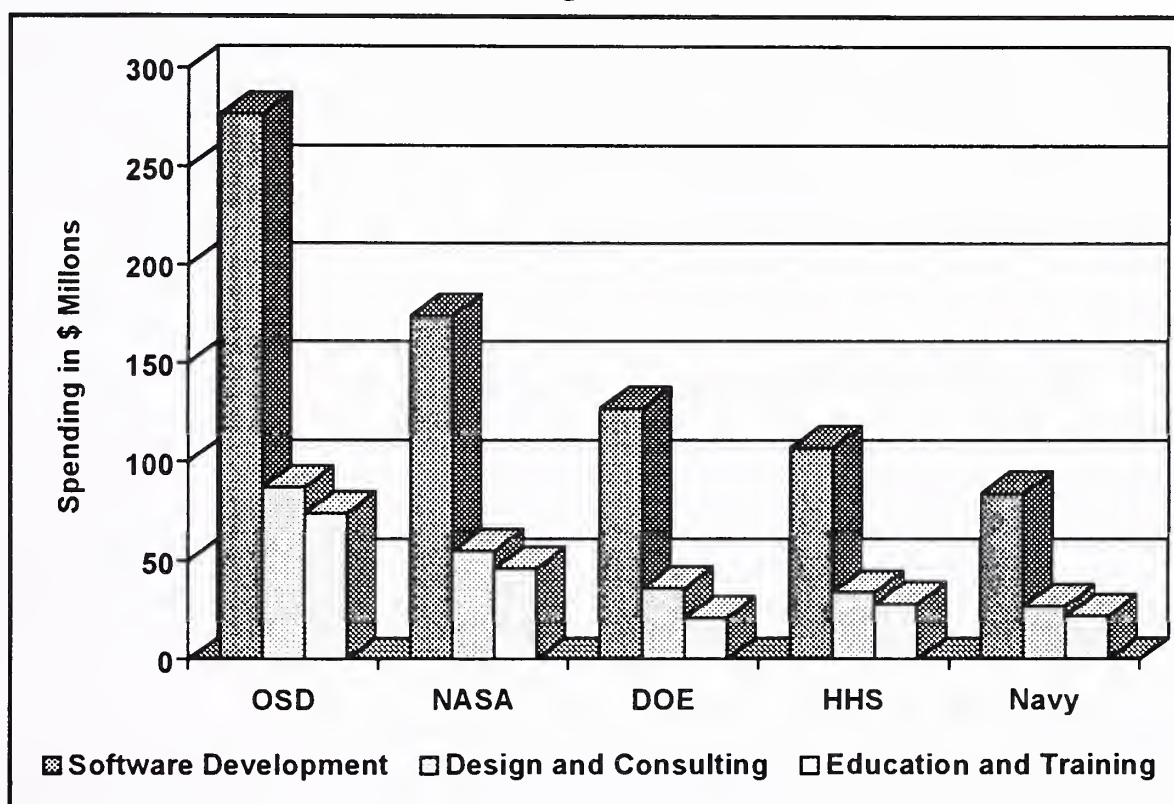
Source: INPUT

2. Systems Integration Professional Services

Systems integration (SI) professional services are conceptualized as any combination of consulting services, software development and/or education and training services. These services commanded 20% of the total federal market for professional services in FY 1996. Within this market, the five leading agencies shown in Exhibit V-17 accounted for 44% in the same year, totaling $480 million of estimated spending in obligations. Systems integration spending at OSD, NASA, DOE, HHS and the Navy is collectively expected to rise at a CAGR of 6% from FY 1996 to FY 2001, with HHS leading at 10% annual growth. OSD allocated an estimated $173 million for systems integration services in FY 1996 and is projected to continue to lead federal agencies in spending over the next several years, while growing at a rate 4% below the federal average. Exhibit V-18 highlights spending on systems integration among the top five agencies using such services in fiscal year 1996.

Vendors not involved in or allied with another vendor for SI may experience greater competition for post-implementation contract support. A number of professional service firms are attracted to SI contracts because of systems operations prospects for five to ten years.

Exhibit V-17

Top Five Agency Budgets for Systems Integration Professional Services

Category	Projected Spending by FY in $ Millions						CAGR 1996-2001
	1996	1997	1998	1999	2000	2001	
Office of the Secretary of Defense	$173	$161	$169	$179	$190	$200	3%
NASA	109	107	117	129	144	159	8%
Energy	78	82	87	93	99	106	6%
Health and Human Services	67	73	80	88	98	109	10%
Navy	53	50	52	53	56	62	3%
Total Top Five Agencies	480	473	505	542	587	636	6%
All Other, Civilian and Defense	599	631	679	736	802	868	8%
Total Federal Market	1,079	1,104	1,184	1,278	1,389	1,504	7%

Sources: OMB and INPUT

Exhibit V-18

Agency Spending by Systems Integration Services, FY 1996

Source: INPUT

3.   Outsourcing Professional Services

The outsourcing market segment is synonymous with traditional systems operations services, also referred to as operation and maintenance (O&M), both of which are defined as contractor-staffed support of client ADP and/or telecommunications equipment on site in cases where the vendor does not manage the complete facility. The equipment and initial software write may not have been provided by the contractor. It is estimated that federal spending in this market segment totaled $1.6 billion in FY 1996, or 29% of the total professional services market, and is projected to reach $2.1 billion in FY 2001 — rising at a moderate CAGR of 5%. Again, OSD was the largest single federal end-user of outsourcing services, spending approximately $247 million in FY 1996, and will continue to hold this position in the federal arena for several years even as its expenditures are projected to rise at a minimal CAGR of 1%. While number two NASA allocated a distant $156 million for systems operations in FY 1996, this figure is expected to grow at a strong rate of 6% annually until FY 2001. Exhibit V-19 offers a five-year forecast of systems operations spending for the two outsourcing submarkets — GOCO and COCO services — among the leading federal end-users.

A number of system outsourcing programs have been added to those expected to be recompeted in the next few years, keeping this a strong market for the next several years:

❏   The leading operational COCO program is FAA's *CORN*, worth $1.5 billion over a ten-year period

❏   Department of Education's *Guaranteed Student Loan Program*

❏   *Laser System Test Facility* for the Army

❏   Navy programs for *PMTC Support, Science and Engineering Center Support* and *PEPSU Software Maintenance*

❏   HFCA *Data Center Facilities Management Contract*

❏   Justice *Automated Litigation Support* recompete worth $375 million

❏   EPA will recompete the *National Computer Center Operation* contract, worth $300 million

Vendors not involved in or allied with another vendor for SI may experience greater competition for post-implementation contract support. A number of professional service firms are attracted to SI contracts because of systems operations prospects for five to ten years.

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Health and Human Services	67	73	80	88	98	109	10%
Navy	53	50	52	53	56	62	3%
Total Top Five Agencies	480	473	505	542	587	636	6%
All Other, Civilian and Defense	599	631	679	736	802	868	8%
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Sources: OMB and INPUT

Exhibit V-18

Agency Spending by Systems Integration Services, FY 1996

Source: INPUT

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❑ HFCA *Data Center Facilities Management Contract*

❑ Justice *Automated Litigation Support* recompete worth $375 million

❑ EPA will recompete the *National Computer Center Operation* contract, worth $300 million

Exhibit V-19

Top Five Agency Budgets for Systems Operations/Outsourcing

Category	Projected Spending by FY in $ Millions						CAGR 1996–2001
	1996	1997	1998	1999	2000	2001	
Office of the Secretary of Defense:							
COCO	$60	$55	$56	$58	$60	$64	1%
GOCO	187	171	177	183	191	202	1%
Total Systems Operations	247	226	233	241	251	265	1%
NASA:							
COCO	38	36	39	42	46	51	6%
GOCO	118	114	122	132	145	161	6%
Total Systems Operations	156	150	161	174	190	211	6%
Energy:							
COCO	35	37	38	40	43	45	6%
GOCO	104	110	116	122	130	138	6%
Total Systems Operations	139	147	155	163	173	183	6%
Health and Human Services:							
COCO	23	25	27	29	31	35	9%
GOCO	73	78	84	91	99	110	9%
Total Systems Operations	96	103	110	119	130	145	9%
Navy:							
COCO	18	17	17	18	19	20	2%
GOCO	57	53	55	57	59	62	2%
Total Systems Operations	75	70	72	75	78	82	2%
Total Top Five Agencies	713	696	731	772	822	886	4%
All Other, Civilian and Defense	897	921	970	1,029	1,099	1,193	6%
Total Federal Market	1,610	1,617	1,701	1,801	1,921	2,079	5%

Source: INPUT

Although industry has used the methodology for years, NASA was the first federal agency to employ mission contracting, which is now used at all centers except the Lewis Research Center in Cleveland, Ohio. The Air Force uses the same type of contracts for a few centers, and other agencies are moving toward allowing the contractor to use the most efficient staff mix to meet mission data processing and communications requirements.

In addition to the prospect of winning a five-year contract, additional opportunities lie in the ability to provide software and hardware add-ons during the contract term. This process is called "flow-through" and enables the incumbent vendor to improve profitability in a delivery mode (GOCO) associated with low fee rates.

a.   Government-Owned, Contractor-Operated

As highlighted in Exhibit V-20, expenditures on GOCO facilities constituted approximately 76% of total outsourcing expenditures at the leading agencies. Total GOCO services at OSD, NASA, Energy, HHS and the Navy amounted to $539 million in FY 1996 — 45% of the total federal GOCO facilities management market of $1.2 billion. Projected compound annual growth rates from fiscal years 1996 to 2001 in GOCO services are a strong 9% at Health and Human Services, 6% at NASA and the Department of Energy, while only a minimal 1% at the Office of the Secretary of Defense and 2% at the Navy. The largest systems operations opportunity will continue to be for GOCO services at Defense administrative agencies via OSD.

b.   Contractor-Owned, Contractor-Operated

COCO facilities management services constitute a second outsourcing submarket. While only comprising 24% of the total systems operations market in FY 1996, the agencies detailed below are projected to sustain the same growth rates for COCO services as they are for GOCO services. The total federal COCO facilities management market is anticipated to rise at a compound annual growth rate of 5%, from $390 million in FY 1996 to $498 million in FY 2001. Forecasts of COCO spending by agency is provided in Exhibit V-19.

Exhibit V-20

Agency Spending by Systems Operations/Outsourcing Services Market Segment, FY 1996

Source: INPUT

VI
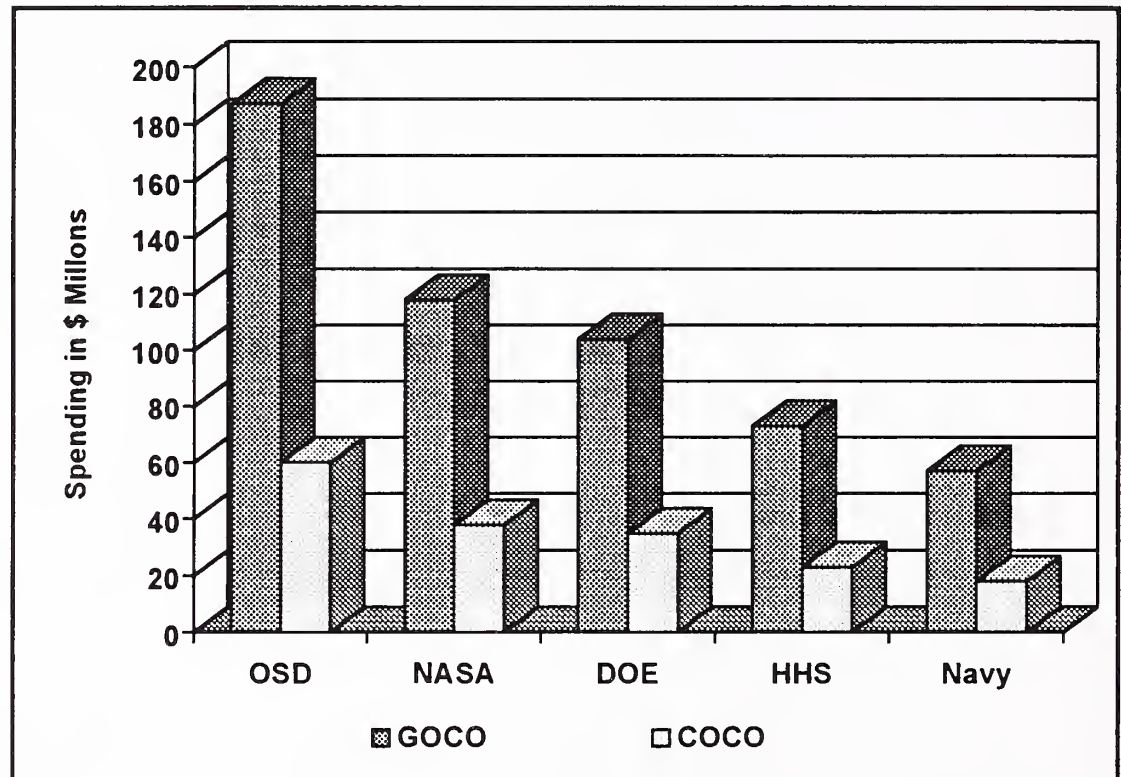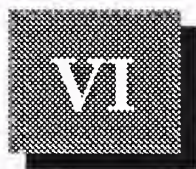
Vendor Analysis

In this section, INPUT provides an overview of the competitive arena in the federal professional services market, as well as a more in-depth analysis of the leading players among professional services contractors.

A
Vendor Overview

To develop a picture of the major players in the federal professional services market, INPUT examined net obligations compiled by GSA's Federal Procurement Data Center (FPDC) for specified reporting periods. FPDC collects information filed on all federal contract actions with obligations greater than $25,000. Obligations are not contract dollars, nor do they reflect potential values for a contract. Obligations are agreements to purchase a specified amount of goods or services and are not accurate for determining specific revenue or spending figures. However, INPUT has found them to be useful for determining market share, as well as for vendor and agency rankings for certain market segments.

INPUT examined the contract actions filed under all professional services product/service codes (PSC) — those that use prefix R4 — with the exception of PSC R426, which encompasses communications professional services. PSCs describe the work being performed for a specific contract action, though they do not classify the type of contractor performing the work as Standard Industrial Classification (SIC) codes do. Analyzing PSCs instead of SIC codes allows any type of contractor — whether it be a hardware vendor, systems integrator or professional services company — to enter the competitive picture, as long as the company is providing some form of professional services to the federal government.

Exhibit VI-1 shows the top 10 vendors in terms of total professional services obligations reported during fiscal year 1996, the latest period such data were compiled by GSA. Obligations reported during fiscal years 1994 and 1995 were also analyzed to emphasize any changes in the composition of leading professional services vendors, as discussed in greater detail below.

Exhibit VI-1

Top Ten Professional Services Vendors, FY 1996

Rank	Company	Obligations ($K)	Market Share
1	Lockheed Martin Corporation	$933,527	17%
2	Raytheon Company (E-Systems)	537,323	10%
3	Computer Sciences Corporation	398,640	7%
4	Science Applications International Corp.	333,257	6%
5	Logicon, Inc.	279,654	5%
6	The Boeing Company	258,658	5%
7	TRW, Inc.	222,000	4%
8	McDonnell Douglas Corporation	213,419	4%
9	BDM International, Inc.	170,757	3%
10	Rockwell International Corporation	146,605	3%
	Top Ten	3,493,840	**63%**
	Total Professional Services Market	**5,512,154**	**100%**

Note: Rounding may cause subtotal discrepancies.   *Sources: INPUT and FPDC*

The presence of some of the better-known aerospace vendors and integrators as leaders in the professional services market is derived from their increasing thrust into alternative areas of the information systems and services marketplace. Smart vendors have broadened their revenue base in the face of a tightened federal market. Also included in this market are firms that have been spun off from parent organizations that are not in the information services market.

Although they have not been included in the top 10 vendor list, the Big Six accounting/consulting firms are a major force in the market. These companies include KPMG Peat Marwick, Ernst & Young, Coopers & Lybrand, Deloitte & Touche, Price Waterhouse and Arthur Andersen. Their omission is largely attributable to the inclusion of systems operations, or outsourcing, and systems integration professional services in the total market for professional services. At 49% of the total market in FY 1996, these market segments draw many Defense contractors and major integrators into the competitive arena. Furthermore, data reported by federal agencies to FPDC only register the prime contractors for any given contract action — subcontract dollars and subcontractors themselves are not counted.

Non-profit organizations also compete with private industry for professional services work from the federal government. Leaders in this area include corporations such as Mitre, Batelle Memorial Institute and the University of California. Finally, some government data centers with unique skills and/or available capacity also compete with industry for government contracts. Government agencies have the choice of contracting outside or using available government centers, including capabilities of other agencies. In many cases the cost is the same, but staying in-house may save the agency time and effort otherwise required to put a contract into place competitively.

Historical market share trends for the top vendors are provided in Exhibit VI-2. Although the listed vendors do not fluctuate dramatically from year to year, rankings often do. Only Lockheed Martin has commanded the same position in this market over a three-year period, especially impressive given its sizable and growing market share. The continually changing demands for different services and the patterns of vendor teams for different programs make a complicated competitive structure. Frequently, today's bidding partners are tomorrow's competitors. Employee changes make a difference in the rankings as well. A skilled and experienced leader can change the stature (and ranking) of a vendor in a relatively short time.

Exhibit VI-2

Comparison of Top Ten Professional Services Vendors,
FY 1994–FY 1996

Current Rank	Company	Rank in FY 1995	Market Share	Rank in FY 1994	Market Share
1	Lockheed Martin Corporation	1	14%	1	13%
2	Raytheon Company (E-Systems)	5 [†]	5%	4 [†]	7%
3	Computer Sciences Corporation	6	4%	9	4%
4	Science Applications International Corp.	3	6%	2	9%
5	Logicon, Inc.	14	2%	15	3%
6	The Boeing Company	4	6%	7	5%
7	TRW, Inc.	7	4%	10	4%
8	McDonnell Douglas Corporation	2	8%	6	5%
9	BDM International, Inc.	11	3%	8	4%
10	Rockwell International Corporation	9	3%	5	6%

[†] *Does not include acquisition of E-Systems*   *Sources: INPUT and FPDC*

An important point to make is vendors' relative specialization in providing professional services to the federal government as compared to other information technology products and services. Among the top 10 vendors in this market, the proportion of total professional services obligations to the company's total federal IT obligations fluctuates widely. As seen in Exhibit VI-3, this figure ranges from as high as 65% with Logicon to as low as 29% with Boeing during fiscal year 1996.

Those vendors primarily engaged in professional services also tend to fall lower in the overall ranking of leading vendors in the industry. Specialized firms that pursue only professional services contracts within the government limit their exposure to other products and services required by the agencies. With the increased importance of past performance and vendor recognition, this factor may weigh heavily in the ability to stay competitive in the future. Vendors that constitute major competitors in various federal market segments such as Lockheed Martin typically have more financial and human resources overall, giving them another competitive advantage.

Exhibit VI-3

MM12

Percent of Federal IT Obligations from Professional Services Contracts, FY 1996
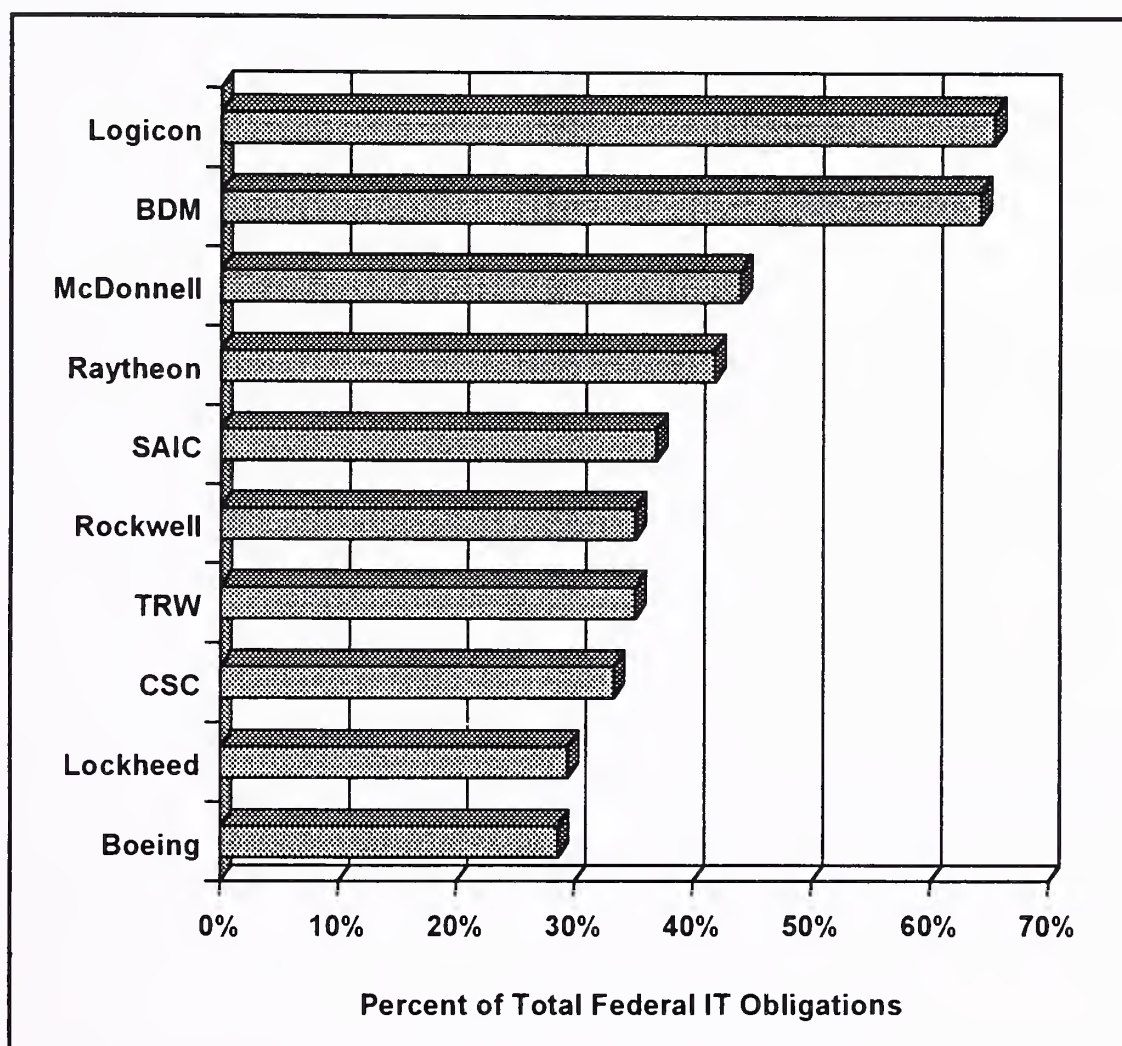
Percent of Total Federal IT Obligations

Sources: INPUT and FPDC

The leading professional services vendors are well positioned in the top 10 agencies requiring such services during FY 1996, as shown in Exhibit VI-4. Checks (✓) represent the presence of significant (at least $5 million) currently-active contracts that require primarily professional services at the given agencies. Contracts held by the leading vendors that primarily satisfy requirements for other information technology products and services are omitted from the data.

Exhibit VI-4

Existing Professional Services Contracts by Vendor and Agency

Leading Vendors	Leading Agencies									
	OSD	NASA	DOE	HHS	Navy	DOJ	Army	USAF	Treas.	Educ.
Lockheed	✓	✓			✓	✓	✓	✓	✓	✓
Raytheon	✓				✓		✓	✓		✓
CSC	✓	✓	✓	✓	✓		✓	✓	✓	✓
SAIC	✓	✓	✓	✓	✓	✓	✓	✓		
Logicon	✓				✓	✓	✓	✓		
Boeing	✓	✓			✓	✓		✓		
TRW	✓	✓			✓	✓	✓	✓	✓	
McDonnell		✓			✓	✓		✓		
BDM	✓		✓	✓		✓	✓	✓		
Rockwell		✓					✓	✓		

Source: INPUT

B

Leading Professional Services Vendors

In the sections that follow, a more detailed analysis is given of the leading professional services vendors to the federal government. Provided are a corporate overview, a summary of the companies' major professional services contracts currently in place, a breakdown of the vendors' leading end-users for professional services and a breakdown of the types of services provided to the federal government by product/service code. Of particular note in the following sections is that PSCs do not match INPUT's market segments as broken out in the previous sections, as contract actions reported to the Federal Procurement Data Center are categorized only by PSC and SIC code.

1. Lockheed Martin Corporation

Lockheed Martin Corporation commanded the largest share of professional services obligations in the federal government for fiscal year 1996 at $934 million — 17% of the total market. The industry giant, a conglomeration of 17 companies, has commanded this position for the past three years in the professional services market, and it has led the industry for total federal IT contract dollars during the same time frame. With $3.2 billion in information technology sales to the government, Lockheed leads the number two position in the federal market — AT&T — by nearly $1 billion.

Total sales for Lockheed Martin reached $26.9 billion in 1996, an 18% increase over 1995 revenues of $22.8 billion. The company credits this dramatic increase to the joining of the defense electronics and systems integration businesses of New York-based Loral Corporation, which was completed in April 1996. The merging of acquired businesses has also led to the divestiture of other units. In February of this year, Lockheed spun off 10 non-core business units as a new independent company, L3 Communications, based in New York. Nine of the ten units came to Lockheed with its purchase of Loral.

Most IT contracts with the federal government are the domain of Lockheed's Federal Systems unit located in Gaithersburg, Maryland. Lockheed Martin Federal Systems is an industry-leading integrator of complex information technology systems for federal, commercial and international users. Lockheed Martin Federal Systems handles information and data in virtually all forms, reinforced by the fact that only 29% of its federal IT obligations derive from professional services — the second lowest among the leading vendors (see Exhibit VI-3).

This Lockheed unit applies systems development and advanced software engineering expertise to mission-critical applications that range from satellite command and control, to tax systems modernization, to work for the classified and worldwide intelligence community. This diversity in IT capabilities has been a major strength for Lockheed throughout the federal government. The division has also achieved ISO 9001 registration, the international quality standard. Lockheed Martin Federal Systems operates in four core business areas: satellite ground/ mission processing systems; command, control, computers, communications and intelligence (C4I); classified systems; and information technology systems.

Though the company currently holds major professional services contracts at eight of the 10 leading agencies for such services (Exhibit VI-4), Lockheed's primary customers are the Air Force, the Navy and NASA as shown in Exhibit VI-5. Exhibit VI-6 highlights the core professional services provided to these agencies during fiscal year 1996, including technical engineering (67% of total), program management support (19% of total), systems engineering (12% of total) and simulations and other services (2% of total).

Lockheed Martin is currently a prime on at least 21 major contracts for professional services and outsourcing. Some of the more significant contracts follow, which have a combined potential life-time value of $4.5 billion:

❑ *Engineering Test and Analysis Support Contract (ETA)* at NASA's Johnson Space Center; awarded on 12/23/1993, expires 12/2003; value $2.8 billion

❑ *Defense Enterprise Integration Services (DEIS II)* at Defense Information Systems Agency (DISA) within OSD; awarded on 7/5/1996, expires 7/2003; value $500 million

❑ *Advanced Distributed Simulation Technology II (ADST II)* with the Naval Air Warfare Center; awarded on 10/23/1995, expires 10/2000; value $500 million

❑ *System Development and Maintenance (SDM)* at Commerce's Patent and Trademark Office (PTO); awarded on 2/12/1997, expires 2/2005; value $254 million

❑ *Army Global Command and Control System (AGCCS)* at the Army; awarded on 12/23/1994, expires 12/1999; value $167 million

❑ *National Airspace Implementation Support Contract (NISC)* at Transportation's Federal Aviation Administration (FAA); awarded on 3/15/1993, expires 3/1998; value $122 million

❑ *FIP DFAS-FSO Financial Integrated Systems Services* at Defense Finance and Accounting Service (DFAS) within OSD; awarded on 9/27/1996, expires 9/2001; value $121 million

Many of these programs are IDIQ contracts, a major push for Lockheed over the past year. Because IDIQs pre-qualify contractors only to compete for actual contract actions/dollars, Lockheed Martin created a professional services unit in 1996 to market the contracts the company has won. Venturing into other new niches, Lockheed submitted a GSA schedule for services (Category S under Schedule 70B/C) in March of this year to take advantage of the growing popularity of this contract medium. The company hopes to make $50 million off the schedule in 1997 alone.

Exhibit VI-5

Lockheed Martin: Top Professional Services Customers, FY 1996

NASA
20%

Army
4%

Navy
34%

Air Force
42%

Total Professional Services Obligations = $934 M
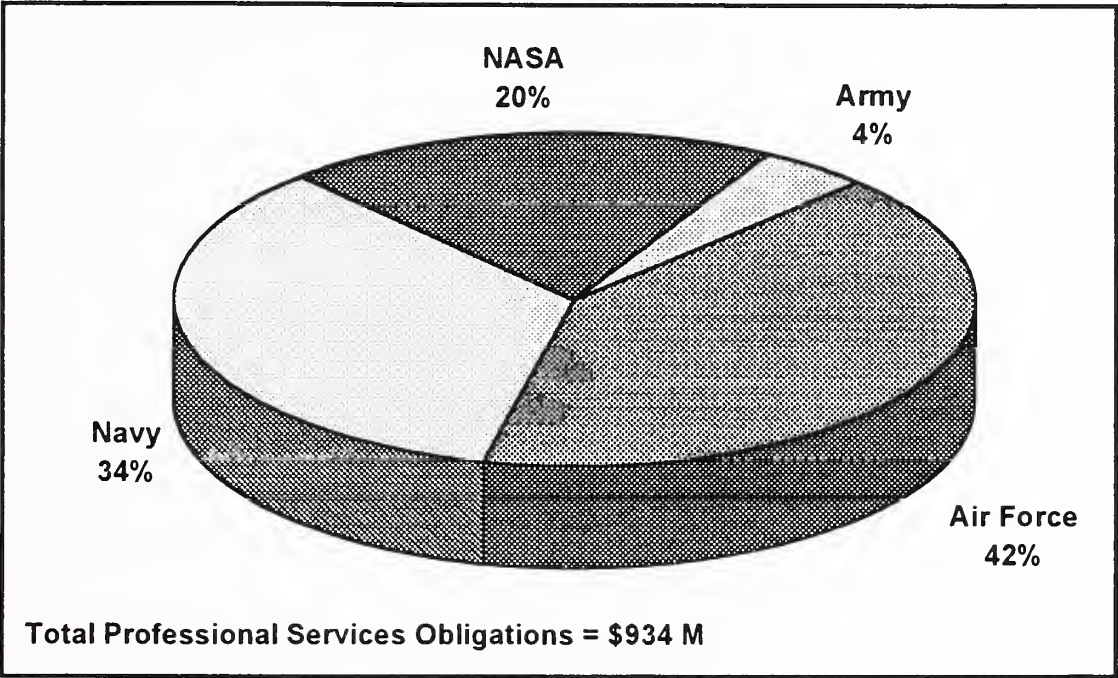
Exhibit VI-6

Lockheed Martin: Obligations by Product/Service Code, FY 1996

Program
Management
Support
19%

Systems
Engineering
12%

Simulations &
Other
2%

Technical
Engineering
67%

Total Professional Services Obligations = $934 M
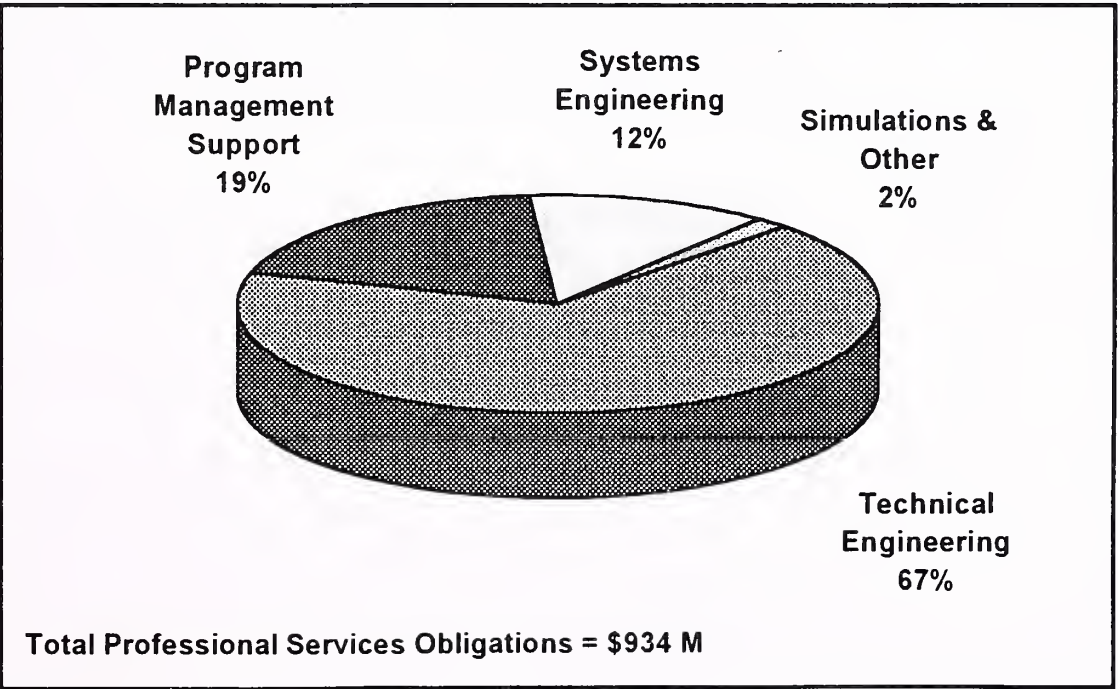
2.   Raytheon Company (E-Systems)

Raytheon Company is an international, high technology company which operates in four major businesses areas: commercial, defense and government electronics, engineering and construction, aircraft and major appliances. Raytheon is a top defense contractor in the U.S. and is also a major competitor in commercial markets worldwide.

As a defense contractor, Raytheon has been faced with tightening DoD budgets and the ensuing data center and base consolidations. Instead of pulling back, however, Raytheon has made a strong push in the Defense information services market with the acquisition of Greenville, Texas-based E-Systems in May 1995, Chrysler's aerospace and defense businesses in 1996 and the purchase of Texas Instruments' missile and defense electronics holdings in early 1997. Perhaps its boldest move came in January, with the proposed $9.5 billion purchase of Hughes Aircraft. Currently pending regulatory review, the deal will strengthen Raytheon's position as a major player in defense contacting overall, including the professional services market.

Raytheon reported revenues of $12.3 billion for 1996, up 5% from last year. Federal contract obligations totaled $1.3 billion for the company during the same time period, with a substantial 42% derived from professional services contract obligations. The Departments of the Army and Transportation (primarily the Federal Aviation Administration) represent the largest federal customers for Raytheon's professional services, constituting well over three-fourths of the company's total contract obligations for such services in FY 1996. (See Exhibit VI-7.) Major services provided to these and other federal end-users are presented in Exhibit VI-8.

Raytheon currently primes at least seven major professional services contracts in both civilian and Defense agencies. The contracts listed below alone have a combined value of $724 million:

❑   *Technical Support Services Follow-On Contract (TSSC-II)* at the FAA; awarded on 6/22/1995, expires 6/2000; value $264 million

❑   *Global Command and Control System Maintenance Contract (GCCS)* at DISA; awarded on 9/12/1996, expires 9/2001; value $193 million

❑   *Major Shared Resource Centers (MSRC)* at the Army; awarded on 8/9/1996, expires 8/2004; value $169 million

❑   *Range Technical Services (RTS)* at Eglin Air Force Base; awarded on 6/29/1993, expires 6/1998; value $98 million

Exhibit VI-7

Raytheon: Top Professional Services Customers, FY 1996

Total Professional Services Obligations = $537 M
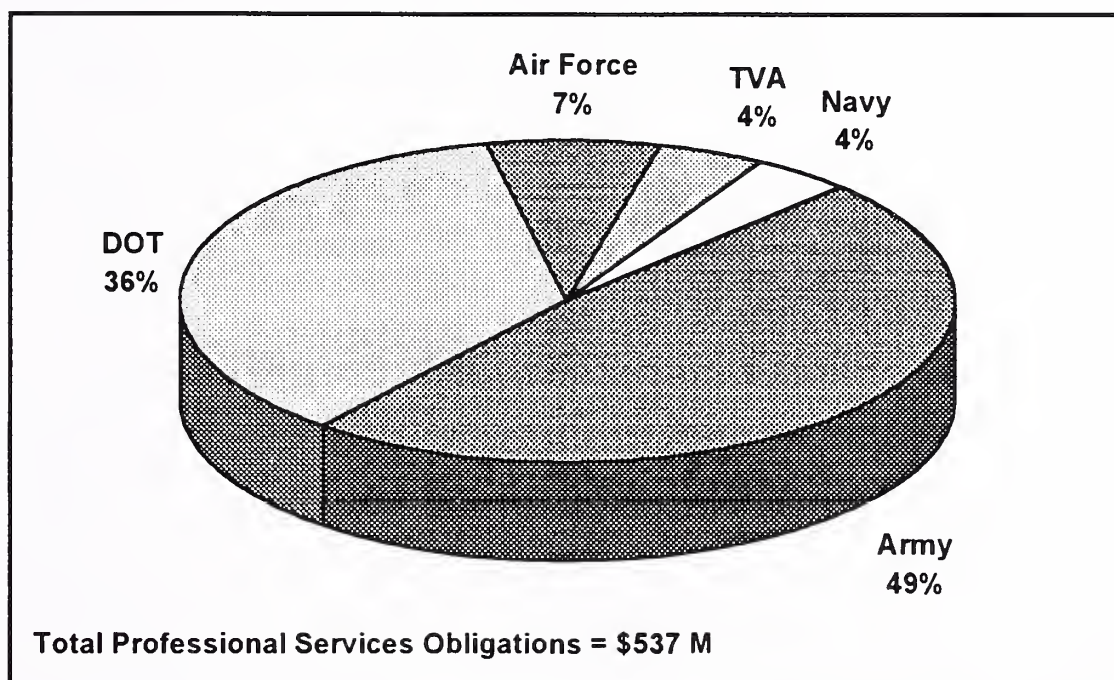
Exhibit VI-8

Raytheon: Obligations by Product/Service Code, FY 1996

Total Professional Services Obligations = $537 M
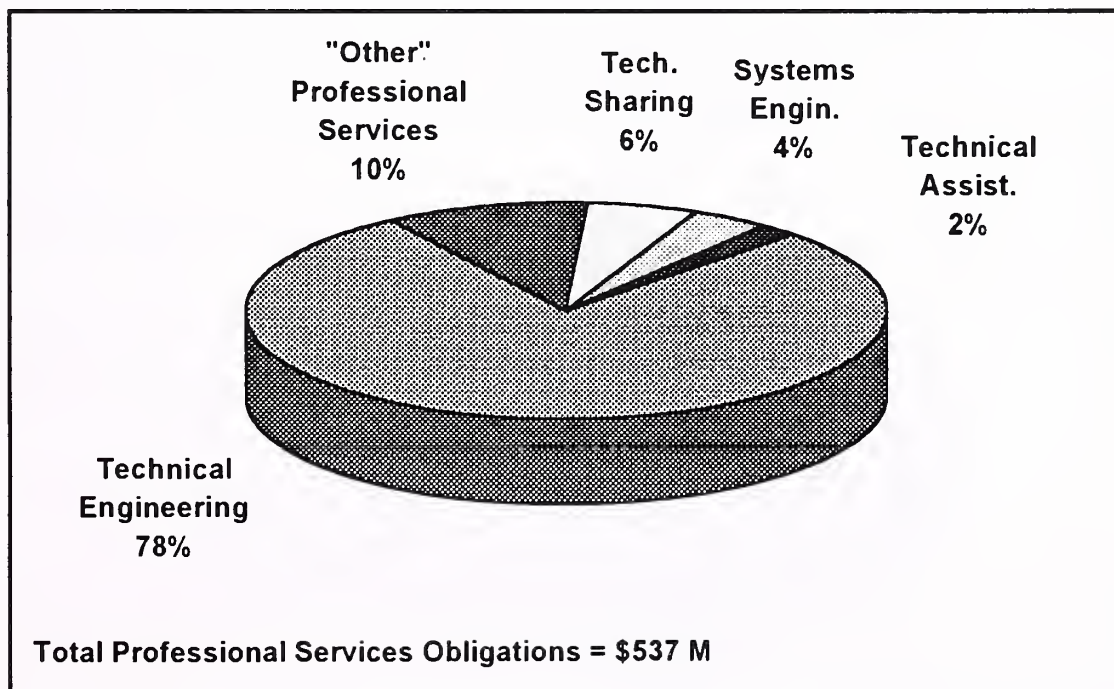
3.   Computer Sciences Corporation

Computer Sciences Corporation (CSC) is a leader in the science of information technology and its application to achieve clients' mission objectives. To this end, CSC offers a full range of services from consulting in the strategic use of information through system design and development, system integration and system outsourcing. CSC is one of the most diversified companies in the industry with the experience and resources to provide information systems and solutions for a wide range of U.S. and foreign government agencies, as well as military services. CSC specializes in management consulting, professional services, systems integration, outsourcing and processing services.

1996 revenues amounted to $4.2 billion for CSC, with reported net earnings of $142 million. Revenues were up 24% from $3.4 billion in 1995, which in turn was up 31% from $2.6 billion in 1994. In fiscal year 1996, CSC received $1.2 billion in federal information systems and services obligations, of which 33% was derived from offering professional services. Such services were mainly provided to the Navy, followed by the Air Force, the Army and NASA. (See Exhibit VI-9.) As shown in Exhibit VI-10, technical engineering is CSC's primary specialization at 83% of its total professional services contract obligations for FY 1996.

CSC currently primes at least 34 federal IT contracts with substantial professional services requirements. Those that follow have a combined potential life-time value of $9.1 billion:

❑ *FEDSIM's Data Center Services (FEDCAC 111)* at GSA; awarded on 2/19/1997, expires 2/2007; value $6.0 billion (task order among three primes)

❑ *Program Information Systems Mission Services (PRISMS)* at NASA's Marshall Space Flight Center; awarded on 5/3/1994, expires 5/2002; value $1.0 billion

❑ *Joint Computer-Aided Logistics Services (JCALS)* at Army Materiel Command; awarded on 12/20/1991, expires 12/2006; value $744 million

❑ *Defense Enterprise Integration Services (DEIS II)* at DISA; awarded on 7/5/1996, expires 7/2003; value $500 million

❑ *Automated Lands and Minerals Records System/Modernization (ALMRS)* with the Department of the Interior Bureau of Land Management (BLM); awarded on 4/7/1993, expires 4/2004; value $403 million

❑ *InfoSec Technical Support Services (CISS-ITS)* at DISA; awarded on 7/12/1995, expires 7/2000; value $300 million

❏ *Chief Information Officer Solutions and Partners (CIOSP)* at HHS' National Institutes of Health (NIH); awarded on 8/28/1996, expires 8/2001; value $100 million (task order among 20 primes)

❏ *Operation and Maintenance Services for the Range Data System* at the Navy; awarded on 4/1/1993, expires 4/1998; value $45 million

❏ *Information Technology Omnibus Procurement (ITOP-Information Systems Engineering)* at Transportation; awarded 5/24/1996, expires 5/2003; value $21 million

A critical success factor for CSC will be the continued marketing of its services under its existing contracts because many are task order, IDIQ programs. CSC's self-proclaimed key to success in the future will be commercial and federal outsourcing. According to the company, no revenue was reported from outsourcing contracts only five years ago, while its outsourcing business reached $2.5 billion in 1996 and now accounts for 45% of the company's entire business. CSC also offers professional services under its GSA Federal Supply Schedule 70B/C, which is expected to draw increasing revenue over the next several years and may pre-qualify the company for upcoming services contracts. Uncovering pre-qualification requirements for acquisitions, and meeting them, is increasingly important in the federal market and should not be overlooked by any contractor.

Exhibit VI-9

CSC: Top Professional Services Customers, FY 1996

Army 15%
NASA 6%
FEMA 5%
Other 2%
Air Force 22%
Navy 50%

Total Professional Services Obligations = $399 M
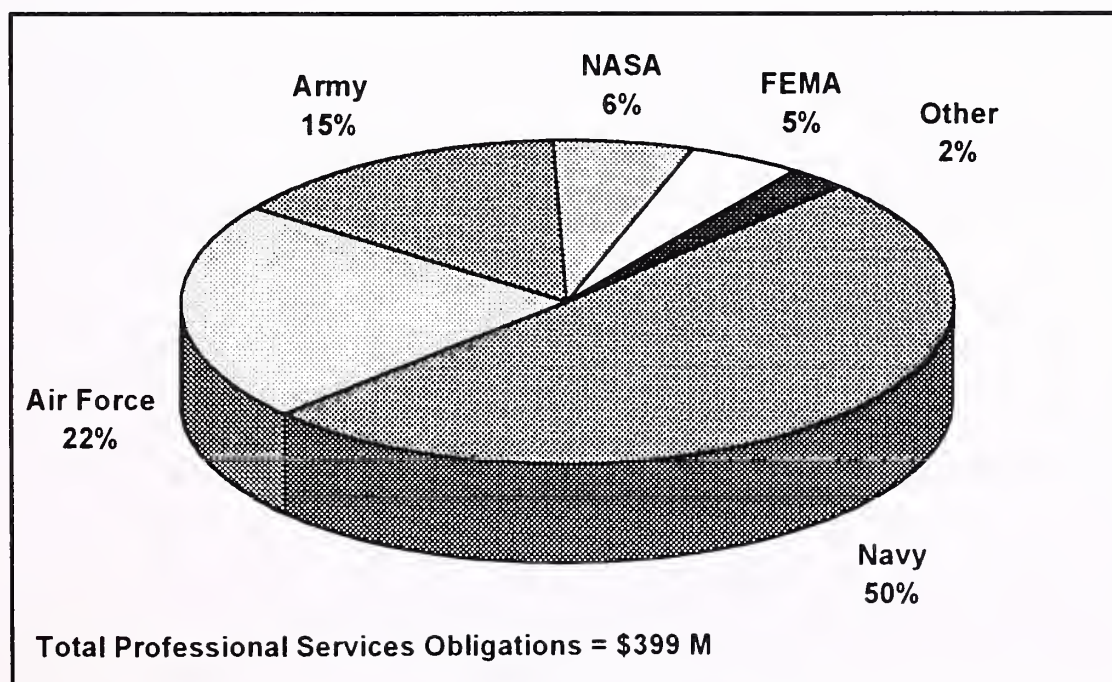
Sources: INPUT and FPDC

Exhibit VI-10

CSC: Obligations by Product/Service Code, FY 1996

Program
Mgmt.
Support
3%

"Other"
Professional
Services
11%

Systems
Engin.
3%

Program
Review
1%

Technical
Engineering
83%

Total Professional Services Obligations = $399 M
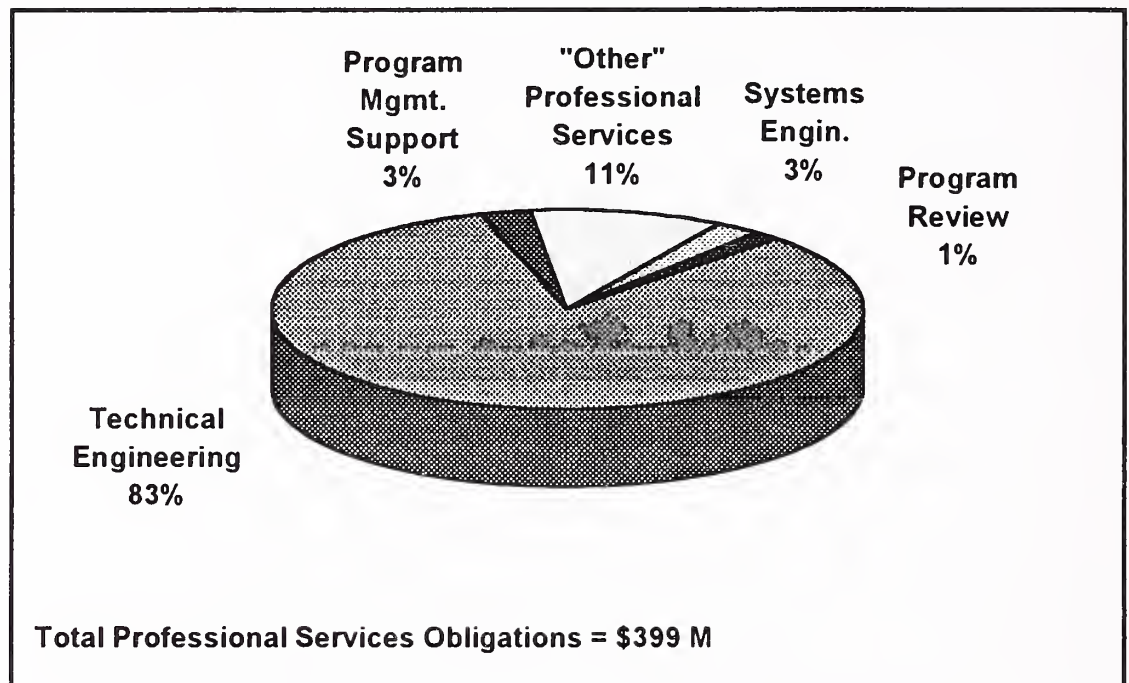
4.   Science Applications International Corporation

Science Applications International Corporation (SAIC) offers a broad range of expertise in technology development and analysis, systems development and integration, technical support services and high technology hardware and software products. SAIC scientists and engineers work to solve complex technical problems of significance to federal, commercial and international customers in a variety of markets, including: energy, environment, national security, health care technology, information technology, Internet, telecommunications and transportation. Known for its decentralized, flexible working environment, one division of the company is often in direct competition for a contract with another division.

SAIC is the largest employee-owned research and engineering company in the U.S. The company posted revenues of $2.2 billion for its 1996 fiscal year, which ended in January 1996. During the first three quarters of its FY 1997, revenues were up 16% and earnings leaped 12% during the same time period — from just under $42 million to well over $46 million. SAIC's total federal IT obligations amounted to a strong $904 million in FY 1996, professional services comprising 37% of this total figure. Because SAIC offers services under a GSA Federal Supply Schedule, this ratio may be expected to increase over the next several years.

Last year marked several major high-profile acquisitions for SAIC, including Bellcore, Aerospace Corporation and Network Solutions, Inc. Such acquisitions will likely keep the company in a strong position in the federal IT market overall, as well as in the professional services market. As seen in Exhibits VI-11 and VI-12, SAIC is also more diversified than many leading professional services vendors — both in terms of end-users serviced and the types of services provided — a factor that could prove to be a major advantage with fluctuating agency budgets and mission requirements.

SAIC is a prime on at least 27 major professional services contracts throughout the federal government. Listed below are some of the more substantial, which have a combined value of $2.2 billion:

❑ *FEDSIM Multiple Award Indefinite Quantity Contracts Recompetition (FEDSIM)* at GSA; awarded on 12/15/1995, expires 12/2000; value $840 million (task order among eight primes)

❑ *InfoSec Technical Support Services (CISS-ITS)* at DISA; awarded on 7/12/1995, expires 7/2000; value $600 million

❑ *Defense Medical Information System Development, Operations and Maintenance Services (DSIDDOMS)* at OSD; awarded on 3/17/1995, expires 3/2000; value $256 million

❑ *Information Mission Area Support (IMA)* at the Army Information Systems Command (ISC); awarded on 11/3/1994, expires 11/1999; value $157 million

❑ *Mission-Oriented Systems Engineering Support (MOSES)* at EPA; awarded on 9/1/1991, expires 9/1998; value $116 million

❑ *Chief Information Officer Solutions and Partners (CIOSP)* at NIH; awarded on 8/28/1996, expires 8/2001; value $100 million (task order among 20 primes)

❑ *Multiple Contractor Resource Base (OMNI)* at the Transportation Systems Center; awarded on 8/31/1993, expires 8/1998; value $76 million

❑ *IRM Technical Support Services* at the Department of Energy; awarded on 7/31/1995, expires 7/2000; value $29 million

❑ *Information Technology Omnibus Procurement (ITOP-Information Systems Engineering)* at the Department of Transportation; awarded 5/24/1996, expires 5/2003; value $21 million

Exhibit VI-11

SAIC: Top Professional Services Customers, FY 1996

Total Professional Services Obligations = $333 M
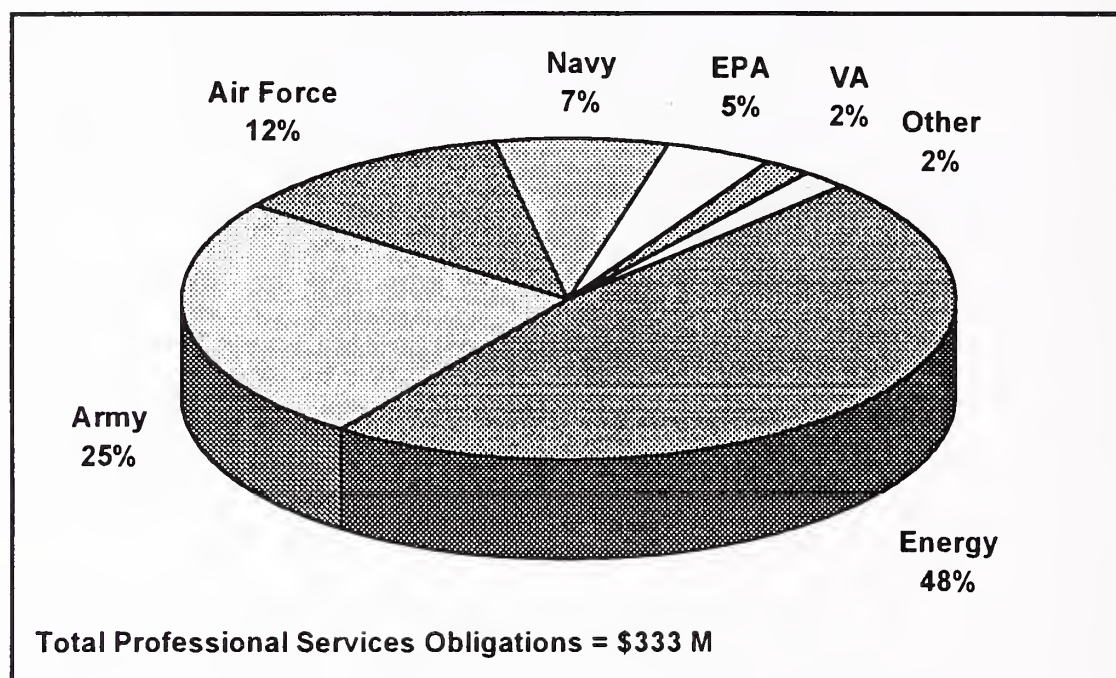
Exhibit VI-12

SAIC: Obligations by Product/Service Code, FY 1996

Total Professional Services Obligations = $333 M
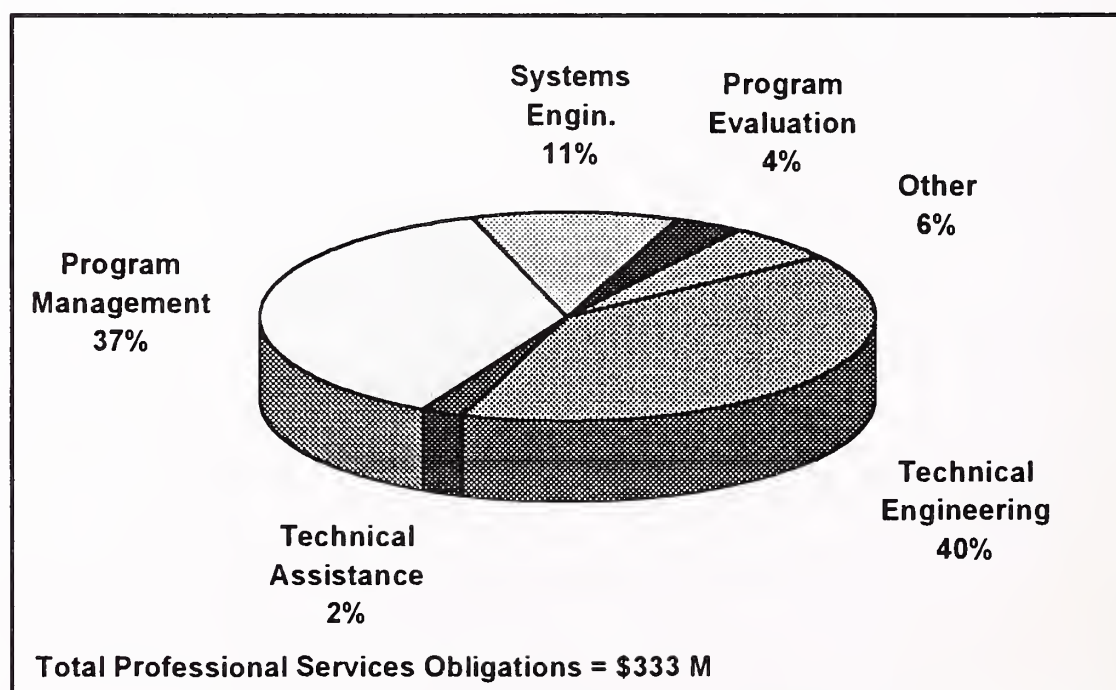
5. Logicon, Inc.

Headquartered in Torrance, California, Logicon, Inc. is a leader in providing advanced systems services to support national security and related civil and industrial needs. Logicon is organized into four groups, each with a specialized market focus — Defense Technology Group, Communications Technology Group, Information Technology Group and Logicon Syscon. This organization may change under the pending $740 million acquisition of Logicon by Northrop Grumman.

Logicon witnessed substantial growth in the federal marketplace from 1995 to 1996, from $120 million in contract obligations to $428 million, respectively. Logicon overall is highly targeted to the federal government, given that its total reported revenue for 1996 was only slightly higher at $474 million. Specializing in the federal services markets, professional services comprised over 65% of Logicon's total federal contract dollars in FY 1996 — the highest proportion among the leading services vendors. Naturally, Logicon submitted a services category under its GSA Schedule 70 in April of this year. In addition to providing another avenue for offering services to the government, the schedule is expected to allow Logicon to bid other services contracts from which it would have been precluded.

Logicon's key customers are DoD agencies, notably the Air Force followed by the Army and the Navy. (See Exhibit VI-13.) Though focused on DoD, the contractor does prime significant professional services contracts at the Department of Health and Human Services and the Department of Justice. Exhibit VI-14 highlights the major professional services provided to the government in fiscal year 1996 — technical and systems engineering, as well as program management support.

Logicon currently holds at least five professional services contracts, with a combined value of $914 million:

❑ *Joint Interoperability Engineering Organization Omnibus (JIEO)* at DISA; awarded on 1/30/1997, expires 1/2002; value $610 million (task order among eight primes)

❑ *Battle Command Training Program (BCTP)* at the Army; awarded 8/19/1994, expires 8/1999; value $104 million

❑ *Information Technology Support Services (ITSS)* at DOJ's Justice Management Division; awarded 9/9/1996, expires 9/2001; value $100 million

❑ *Chief Information Officer Solutions and Partners (CIOSP)* at NIH; awarded on 8/28/1996, expires 8/2001; value $100 million (task order among 20 primes)

❑ *Engineering and Technical Support to USSTRATCOM* at the Air Force; awarded on 10/1/1996, expires 10/2001; value unknown at this time

Exhibit VI-13

Logicon: Top Professional Services Customers, FY 1996

Navy
5%

Army
32%

Air Force
63%

Total Professional Services Obligations = $280 M
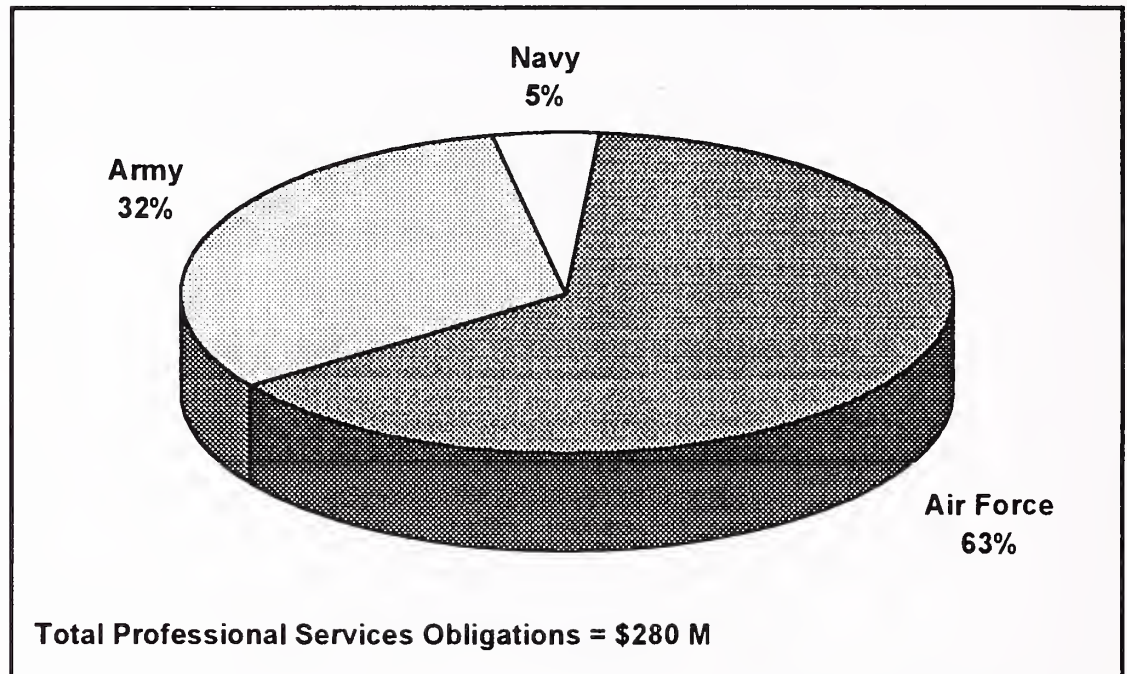
Exhibit VI-14

Logicon: Obligations by Product/Service Code, FY 1996

Systems
Engineering
4%

Program
Management
Support
4%

"Other"
Professional
Services
59%

Technical
Engineering
33%

Total Professional Services Obligations = $280 M
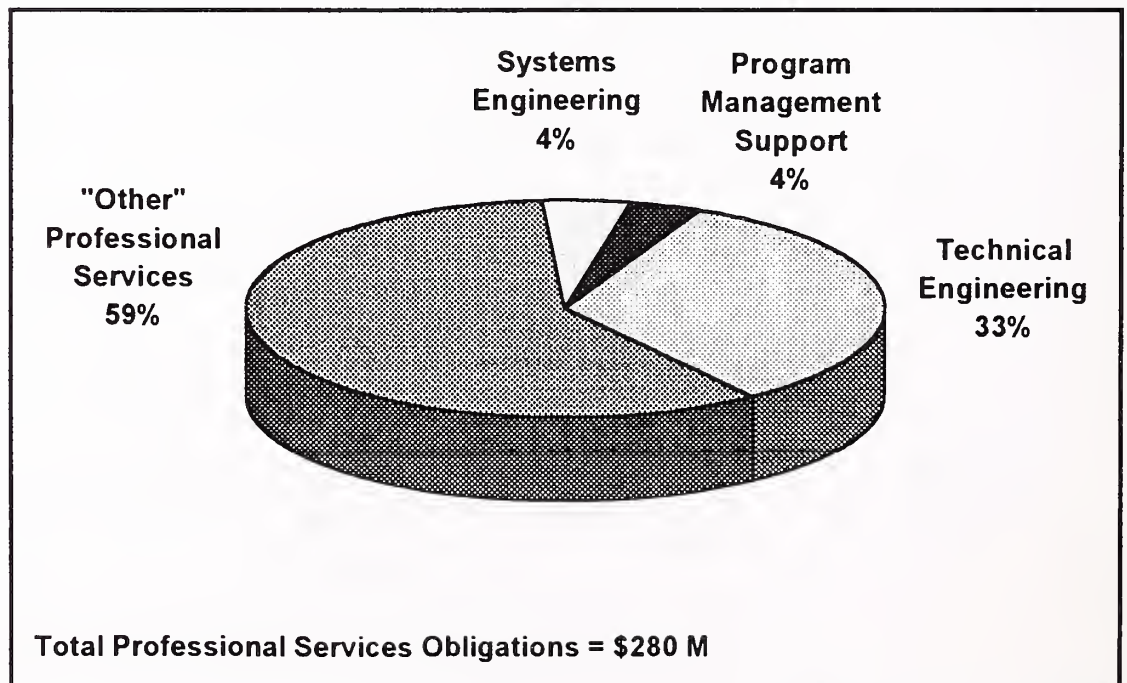
6.   The Boeing Company

The Boeing Company (Boeing) is organized into three major business segments — commercial airplanes, information and support services and defense and space. Boeing's Commercial Airplane Group is a primary manufacturer of passenger jets. The Defense & Space Group encompasses virtually all of the company's business with the Department of Defense and NASA. Defense and space programs include helicopters, military aircraft, missiles and missile-defense systems, advanced electronic systems, rocket boosters and portions of the nation's major space-faring projects. Boeing Information and Support Services provides computing resources, information management and telecommunications services to all Boeing operating divisions as well as commercial customers. Its primary function is to support Boeing's computing needs, and it is responsible for the design, development, implementation, acquisition, integration, management and maintenance of a variety of computing hardware, software and telecommunications systems that are essential to Boeing operations.

Total Boeing revenues amounted to $22.6 billion in 1996, with net reported earnings of $1.1 billion. Federal obligations during the same period totaled $904 million, of which 29% came from the provision of professional services. While Boeing has major professional services contracts at OSD, NASA, HHS, the Navy, the Army and the Air Force, all professional services contract actions reported to GSA during FY 1996 were from the Department of the Air Force. To ease agency access to its services, Boeing intends to offer services under a GSA schedule in the near future. As highlighted in Exhibit VI-15, Boeing currently provides primarily systems engineering services to the federal government, followed by program management support and technical engineering.

Boeing currently primes seven professional services contracts, a brief overview of which follows. These contracts have a combined potential value of $2.7 billion:

❑ *Reserve Component Automation System (RCAS)* at the Army National Guard Bureau; awarded 9/27/1991, expires 9/2003; value $1.6 billion

❑ *Defense Enterprise Integration Services (DEIS II)* at DISA; awarded on 7/5/1996, expires 7/2003; value $500 million

❑ *NASA Headquarters Information and Resource Management Support Services (I&RM)* at NASA; awarded on 11/25/1995, expires 11/2000; value $200 million

❑ *FIP DFAS-FSO Financial Integrated Systems Services* at DFAS; awarded on 9/27/1996, expires 9/2001; value $160 million

❑ *Chief Information Officer Solutions and Partners (CIOSP)* at NIH; awarded on 8/28/1996, expires 8/2001; value $100 million (task order among 20 primes)

❑ *Scientific and Engineering Support Services (SESS)* at the Navy; awarded 3/4/1997, expires 3/2003; value $91 million

❑ *Business and Administrative Support Services (BASS)* at the Navy; awarded 5/31/1996, expires 5/2001; value $61 million

> *Note: No Air Force programs are listed because IT services provided to the agency are embedded in contracts not primarily for professional services*

Keys to future success for Boeing will be the efficiency of integrating its newly acquired units and its mergers. Boeing purchased Rockwell International's aerospace and defense units in late 1996. Of even more significance to the market is Boeing's pending merger with McDonnell Douglas Corporation, which is slated for completion this summer. This massive unification will significantly strengthen Boeing's position in the Defense market overall, in addition to the professional services market. Though similar units and functions will likely be consolidated once the merger is finalized, the company's presence is expected to be much more extensive. Combining both companies' FY 1996 obligations for professional services yields $472 million, or 9% of the total market. This would place the consolidated company in third place among leading vendors after Lockheed and Raytheon. The merged company will be named The Boeing Company, though the McDonnell name will be retained in connection with the defense systems business because it enjoys wide recognition in this industry.

Exhibit VI-15

Boeing: Obligations by Product/Service Code, FY 1996

Technical Engin. 2%

"Other" Professional Services 5%

Program Management Support 18%

Systems Engineering 75%

Total Professional Services Obligations = $259 M
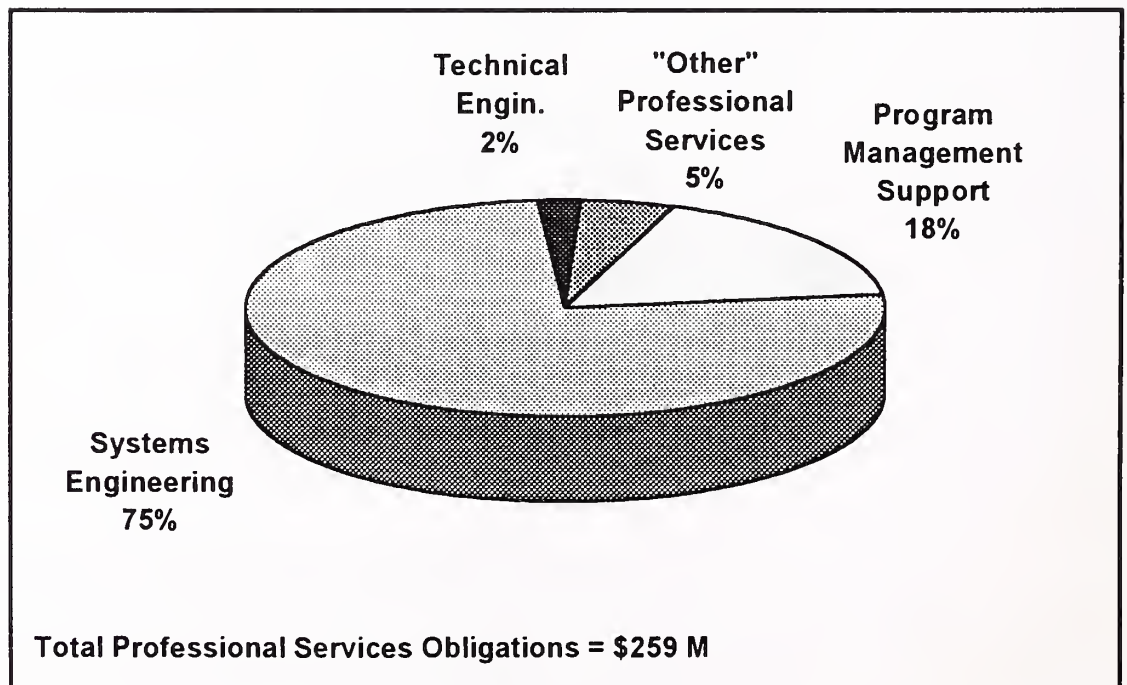
Sources: INPUT and FPDC

7. TRW, Inc.

TRW, Inc. is a global company, strategically focused on providing products and services with a high technology or engineering content to the automotive, space and defense markets. TRW provides automotive equipment, spacecraft, electronic systems, equipment, software and systems engineering support services. The company also provided information services until September 1996, when it sold the division for $1.1 billion to Bain Capital, Inc. and Thomas H. Lee Company, two investment banking firms located in Boston, Massachusetts. TRW has a long record of developing and applying advanced technology to create sustained competitive advantage within new businesses.

Total revenues for TRW reached $9.9 billion in 1996, with $480 million reported in net earnings. These figures are up slightly from $9.6 billion and $446 million in 1995, respectively. Government clients, which account for roughly 30% of TRW's sales, include NASA, the Departments of Defense, Health and Human Services, Transportation, Justice and the Treasury. Fiscal year 1996 contract obligations specifically for professional services came largely from the Air Force (at 53%) and Transportation (at 37%), as shown in Exhibit VI-16. Roughly a third of TRW's federal contract work is devoted to providing professional and systems integration services.

Government systems integration contracts are primarily the domain of TRW's systems integration group located in Fairfax, Virginia — one of the company's five divisions. The division performs a wide range of government work including systems-integration, systems engineering and hardware manufacturing. It also provides information systems and related software to federal clients. For professional services, the company's focus in FY 1996 was systems engineering at 56% of total obligations, followed by technical assistance at 22% and technical engineering at 7%. (See Exhibit VI-17.) To increase federal access to similar services, TRW is currently in the process of obtaining a GSA schedule to provide professional services under 70B/C.

TRW is an active prime on at least 12 professional services contracts. Those summarized below represent a potential value of $1.9 billion:

❑ *Battle Management Command, Control and Communications/ Systems Engineering and Integration (BMC3/SE&I)* at OSD; awarded on 8/24/1995, expires 8/2000; value $679 million

❑ *Integration Support Contract (ISC)* at the Internal Revenue Service (IRS); awarded 12/11/1991, expires 12/2003; value $301 million

❑ *National Testbed Facility - Operation and Maintenance (NTF)* at the Air Force; awarded on 10/27/1994, expires 10/1997; value $300 million

❑ *CDC Information Systems Support Services (CISSS)* at HHS' Centers for Disease Control and Prevention (CDC); awarded on 9/30/1996, expires 9/2001; value $243 million

❑ *Technical Assistance Contract (TAC)* at the Federal Aviation Administration; awarded 6/12/1995, expires 6/2000; value $231 million

❑ *EOS Data and Operations System (EDOS)* at NASA's Goddard Space Flight Center; awarded 9/9/1994, expires 9/2002; value $121 million

Exhibit VI-16

TRW: Top Professional Services Customers, FY 1996
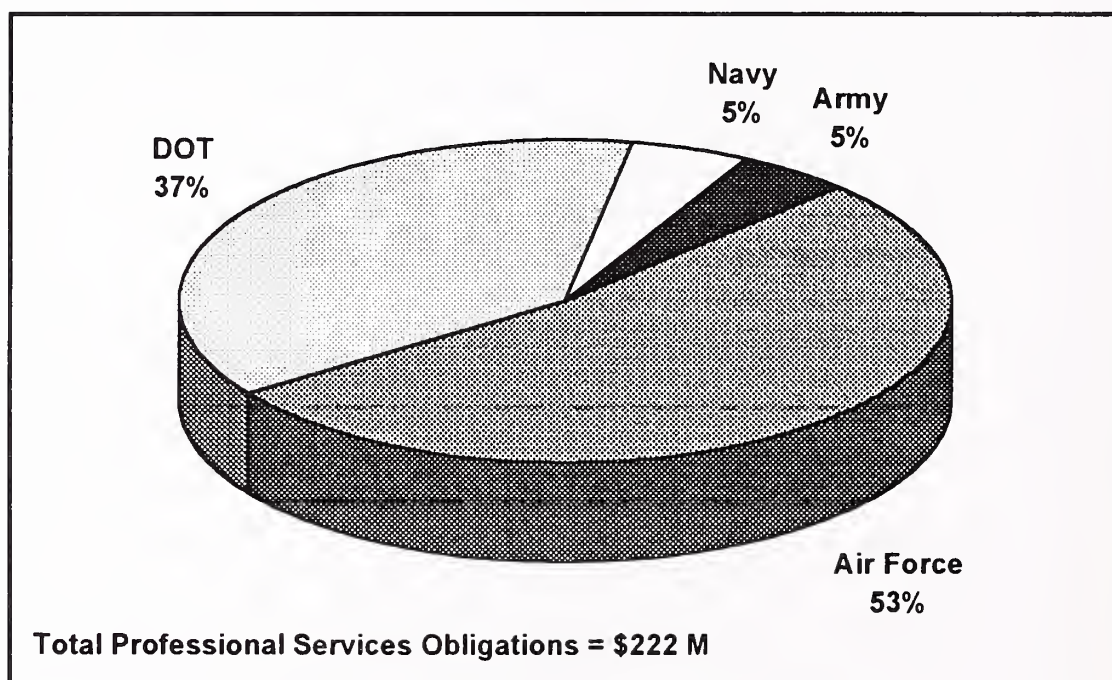
Total Professional Services Obligations = $222 M

Sources: INPUT and FPDC

TRW: Obligations by Product/Service Code, FY 1996

Technical Assistance 22%

Technical Engineering 7%

"Other" Professional Services 16%

Systems Engineering 56%

Total Professional Services Obligations = $222 M
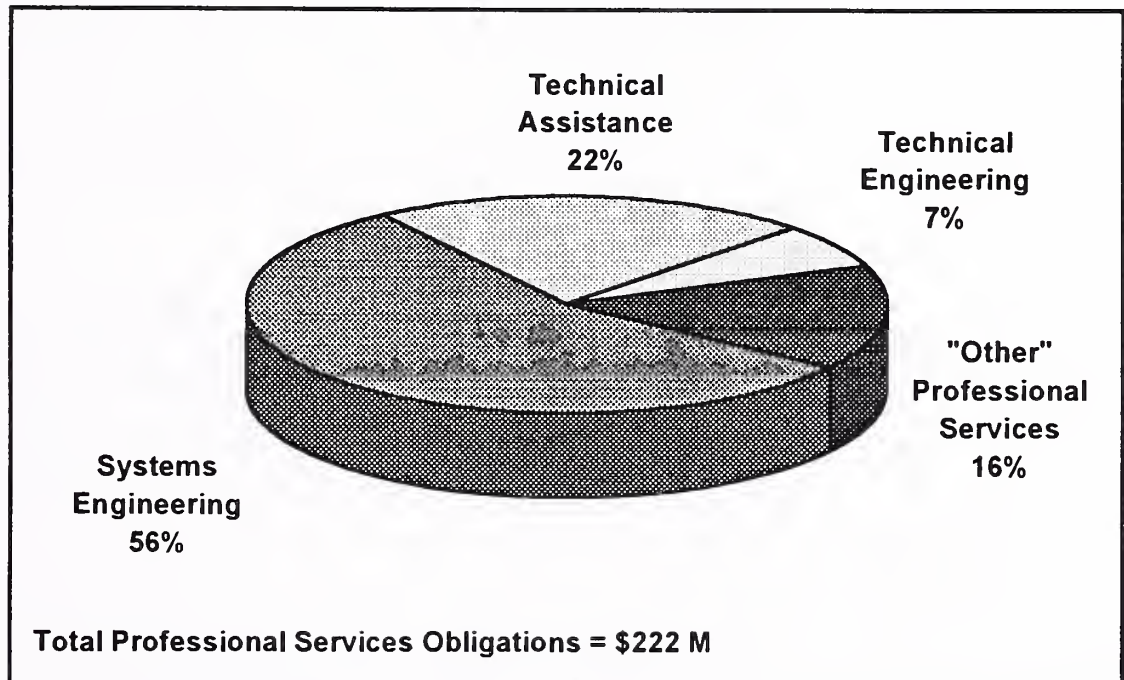
Sources: INPUT and FPDC

8. McDonnell Douglas Corporation

McDonnell Douglas Corporation is one of the world's leading aerospace and defense companies, employing nearly 64,000 people worldwide. It designs, develops, manufactures, integrates and supports military and commercial aircraft, helicopters, missiles, space-launch vehicles and other space systems, as well as sensing systems. In addition, it operates four complementary businesses involved in finance, real estate, technical services and travel. McDonnell's pending merger with The Boeing Company will likely boost its overall presence in the federal professional services market, and their integration will likely allow both companies to target additional niche markets within DoD.

Reported revenues for 1996 totaled $13.8 billion, a 3% decrease from $14.3 billion in 1995. This decrease is largely attributable to McDonnell's commercial aircraft activity, which dropped off 15% during the same time period. Other core activities, such as information systems and services, have witnessed sustained growth at McDonnell Douglas. Missiles, space, and electronic systems comprised 16% of the company's total revenue in 1996, and grew 14% over 1995 levels. Financial and other information services revenues, although only 3% of McDonnell's total reported revenue, grew at a rate of 10% over 1995 revenues.

McDonnell's federal contract obligations totaled $485 million during fiscal year 1996, 44% of which was derived from providing professional services. Leading federal customers for McDonnell's professional services are NASA, the Departments of the Navy and Air Force and the Departments of Transportation and Health and Human Services. (See Exhibits VI-4 and VI-18.) Based on professional services actions reported to FPDC, the company provided almost exclusively systems and technical engineering, with less than one percent going to intelligence services. (See Exhibit VI-19.)

McDonnell Douglas provides a variety of services and equipment to the federal government. While a leading professional services vendor, McDonnell furnishes these services through existing contracts that require a full range of equipment and services — not necessarily professional services as conceptualized here. In 1996, a majority of its contracts called for R&D, electronics and communications equipment, management services, equipment installation and training devices/ equipment. Only a few of McDonnell's contracts can, therefore, be categorized as professional services programs. One, on which the company is a sub to Intermetrics (one of 20 primes), is NIH's $100 million CIOSP initiative. McDonnell also won a $25 million cooperative agreement for advanced technology development at the Naval Air Systems Command.

Exhibit VI-18

McDonnell Douglas: Top Professional Services Customers, FY 1996

Total Professional Services Obligations = $213 M

Sources: INPUT and FPDC

MM12
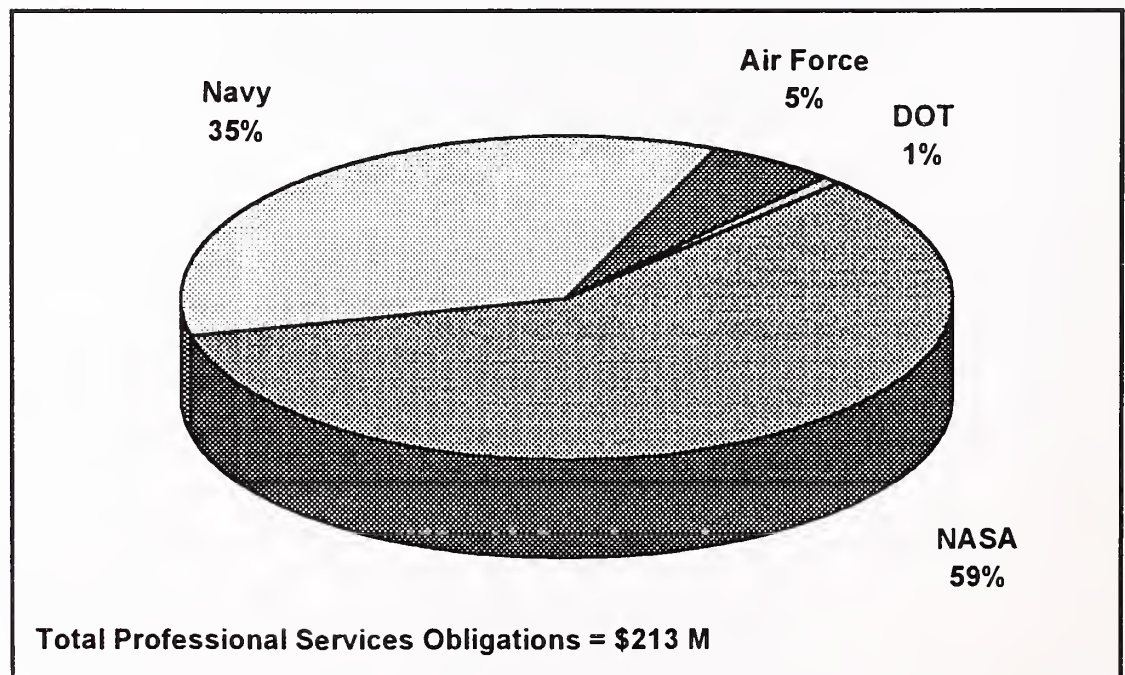
Exhibit VI-19

McDonnell Douglas: Obligations by Product/Service Code, FY 1996

Systems Engineering 39%

Technical Engineering 61%

Total Professional Services Obligations = $213 M
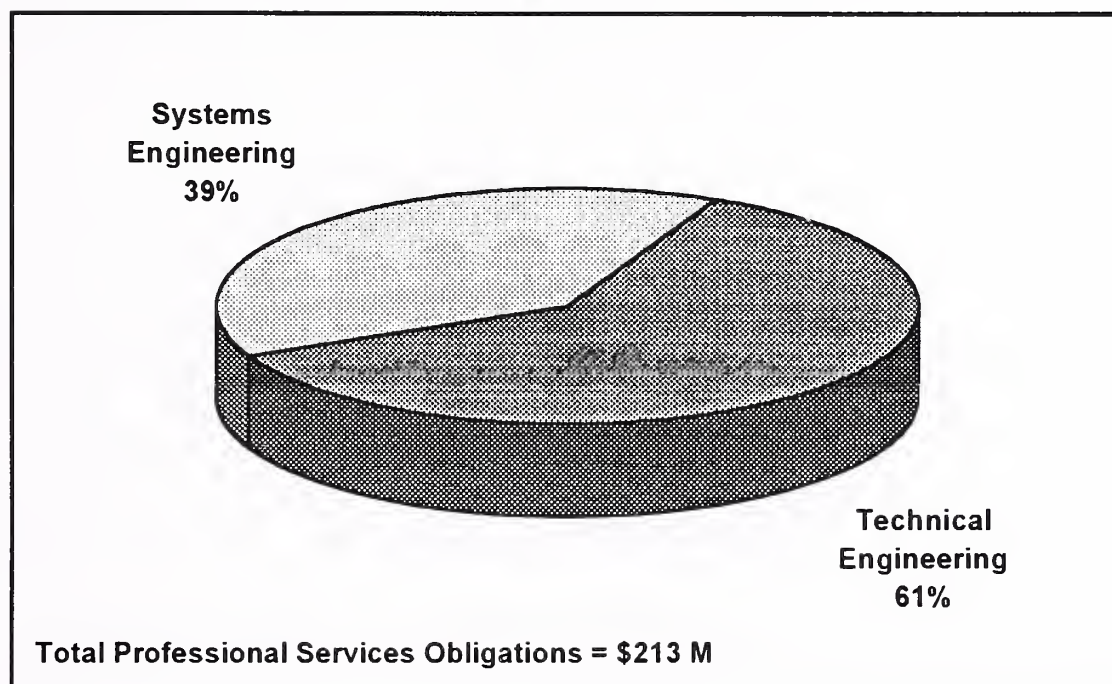
Sources: INPUT and FPDC

9.   BDM International, Inc.

Headquartered in McLean, Virginia, BDM International (BDM) is a publicly held multinational information services firm with three core business practices: systems and software integration, computer and technical services and enterprise management and operations. Within these areas, the business of BDM focuses on devising solutions to challenges in almost every area of business and government.

The Systems and Software Integration unit integrates user-oriented systems solutions — combining COTS hardware and software with BDM-developed software — for a diversity of application areas. This diversity often takes the form of consolidating computer operations and/or migrating from older legacy systems to more flexible, standardized open systems. The Computer and Technical Services division provides federal and commercial IT support ranging from large-scale, full life-cycle development programs to small analytical and management support projects. At 12% of total revenue in 1996, the Enterprise Management and Operations division is also a key element in BDM's global operations. The unit manages and operates a variety of centers, including R&D, test, training and data centers.

BDM continues to pursue an aggressive growth and diversification strategy, focusing on IT systems and expansion into targeted vertical markets on a global scale, both commercial and governmental. Corporate acquisitions in 1996 included CW Systems, Inc., IG Systems, Inc., Melco Systems, Inc. and RTGI Systems Software. This year alone, BDM has acquired Advanced Systems Design, Inc. and Software Engineering, Inc.

Since 1991, BDM has achieved 28% compound annual growth accomplished through both internal growth and acquisitions. The company reported $1.0 billion in revenues for 1996, up 12% from $890 million in 1995. In 1996, $266 million in sales came from federal contracts held by BDM, a large 64% in the form of professional services (Exhibit VI-3). BDM's top federal customers and leading types of services provided are presented in Exhibits VI-20 and VI-21.

BDM currently primes at least eight professional services contracts. Those listed below represent a potential life-time value of $1.2 billion:

❏ *Defense Enterprise Integration Services (DEIS II)* at DISA; awarded on 7/5/1996, expires 7/2003; value $500 million

❏ *Defense Management Review Decision 924 (DMRD 924)* with the Air Force; awarded 2/1/1993, expires 2/1998; value $362 million

❏ *Strategic Information Systems Technical Integration Resources (SISTIR)* at HHS' Food and Drug Administration (FDA); awarded 3/27/1997, expires 3/2004; value $170 million

❏ *Information Technology Support Services (ITSS)* at DOJ's Justice Management Division; awarded 9/9/1996, expires 9/2001; value $115 million

❏ *Health Applications for the National Information Infrastructure* at HHS' National Library of Medicine; awarded on 9/30/1996, expires 9/2001; value $42 million (task order among 19 primes)

❏ *Professional, Administrative and Management Support Services* at the Army National Guard Bureau; awarded 5/22/1996, expires 5/2001; value $30 million

Specialized in offering services to the government, BDM also submitted a Category S schedule under its GSA Federal Supply Schedule, offering systems analysis and design, installation, networking, project management, records management, resource and facilities management and database planning and design services.

Exhibit VI-20

BDM: Top Professional Services Customers,
FY 1996

FEMA
1%

Air Force
31%

Energy
48%

Army
20%

Total Professional Services Obligations = $171 M
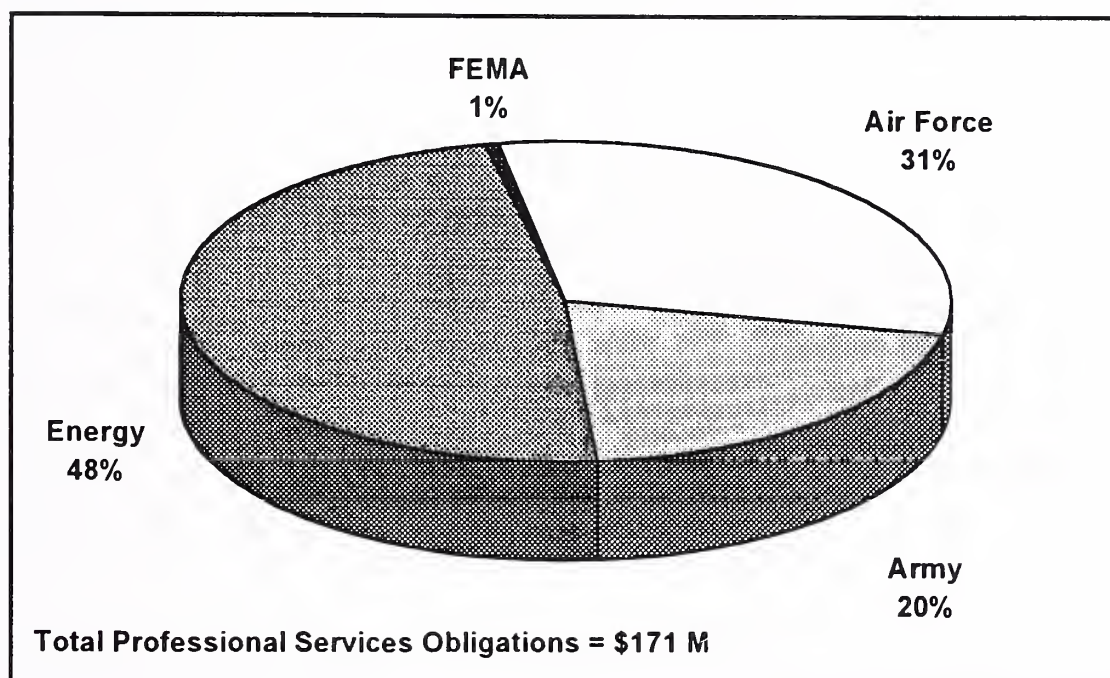
Sources: INPUT and FPDC

Exhibit VI-21

BDM: Obligations by Product/Service Code,
FY 1996

Technical
Assistance
29%

Systems
Engineering
1%

Program
Management
Support
10%

"Other"
Professional
Services
4%

Technical
Engineering
56%

Total Professional Services Obligations = $171 M
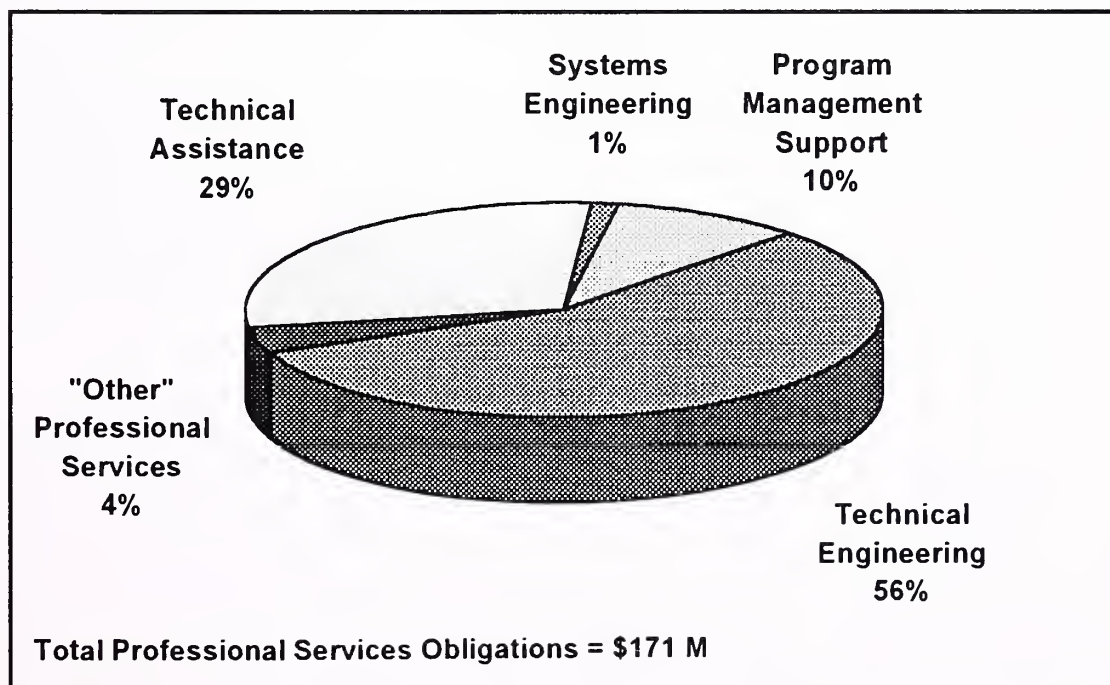
Sources: INPUT and FPDC

10. Rockwell International Corporation

Rockwell International Corporation (Rockwell) is composed of leading businesses in the following industries: industrial automation, semiconductor systems, avionics and communications systems and automotive component systems. Rockwell Automation is a major hardware and software supplier in North America and helps customers optimize their automation investments by applying innovative technology to a constant flow of new products. Collins Avionics and Communications provides advanced avionics and airborne/mobile communications systems for commercial and military applications worldwide. In addition to providing communication, navigation and sensor products such as flight control and flight management systems, it also provides a broad spectrum of products, systems and services to airlines, aircraft manufacturers and business aircraft owners. Rockwell Semiconductor Systems is a leading supplier of personal computer modem solutions and facsimile modems for office automation applications. Finally, Rockwell Automotive is a leading global supplier of systems and components for passenger cars and trucks.

To focus on its electronics business, Rockwell sold its defense sector for $3.2 billion to Boeing in December of last year and is in the process of spinning off its $3.1 billion automotive division. The former will significantly alter Rockwell's competitive position in the professional services market, which is currently almost entirely in the Department of Defense. (See Exhibit VI-22.) Expect the company to be more active in high-tech mission civilian agencies, such as the National Aeronautics and Space Administration.

Rockwell reported revenues and net earnings of $10.5 billion and $726 million in 1996, respectively. The company typically ranks among the top 20 federal contractors with $417 million in IT obligations during FY 1996. Of this total, 35% or $147 million was derived from professional services contract actions. Within this market, Rockwell is primarily engaged in systems engineering, technical engineering and program management support, as shown in Exhibit VI-23.

Similar to McDonnell Douglas, Rockwell provides many services under hardware, communications, networking and integration contracts. For example, the Department of the Army awarded its $20 million Universal Modem System (UMS) contract to Rockwell Collins in February 1997. While the UMS is a communications program, the company plans to offer integration and operations professional services under the contract as well. However, Rockwell does hold a professional services contract with NASA — the Systems Integration for the Space Shuttle Program (SSP) at Johnson Space Center, worth approximately $175 million.

Exhibit VI-22

Rockwell: Top Professional Services Customers, FY 1996

Air Force
78%

Army
22%

Total Professional Services Obligations = $147 M
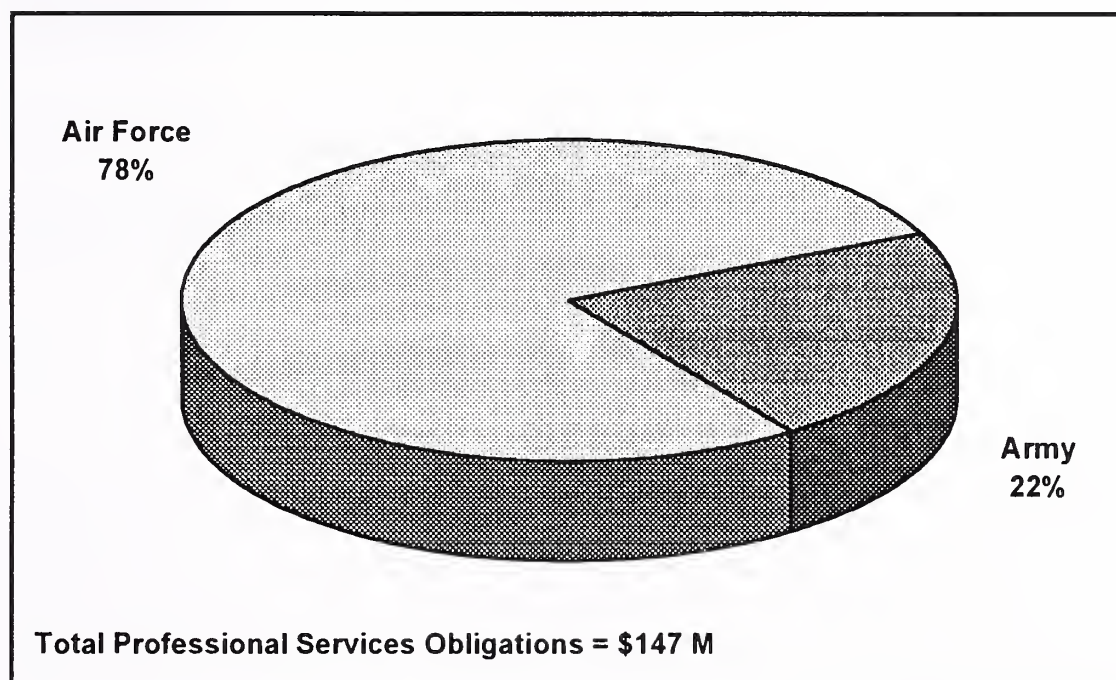
Sources: INPUT and FPDC

Exhibit VI-23

Rockwell: Obligations by Product/Service Code, FY 1996

Program Management Support 21%

Systems Engineering 41%

Technical Engineering 38%

Total Professional Services Obligations = $147 M
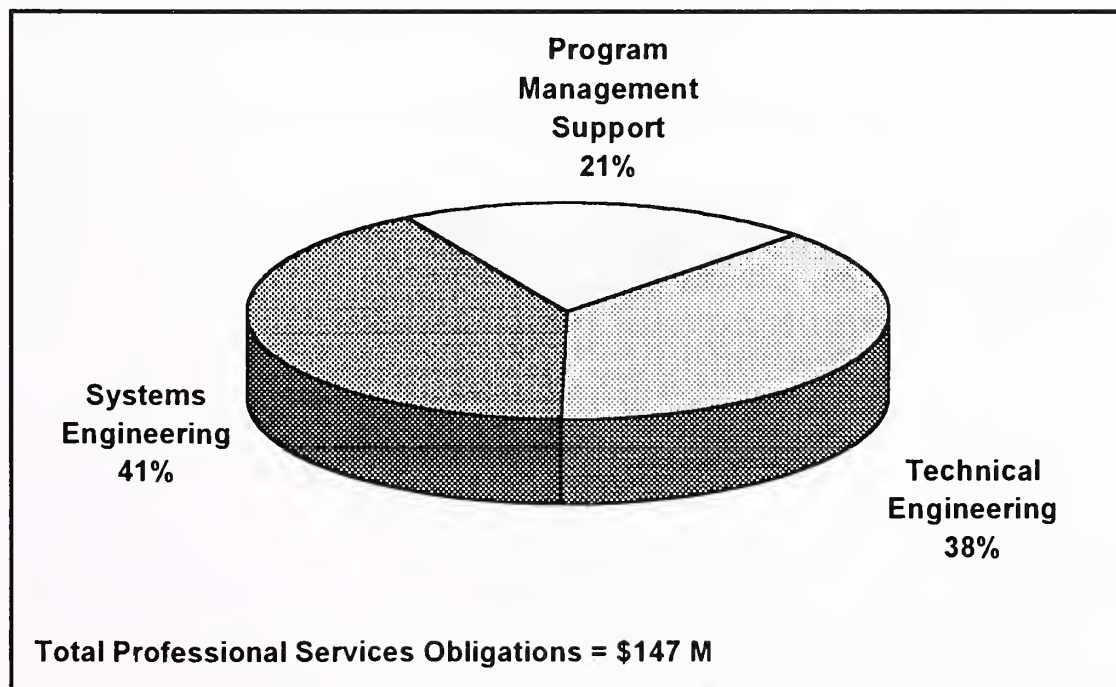
Sources: INPUT and FPDC

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VII

Conclusions and Recommendations

The federal professional services market is entering a period of dynamic evolution. This market is subject not only to all of the forces affecting the overall information technology market, but also to the new industry structure being created by the acquisition reforms of 1996. Constant awareness of regulatory changes and commercial developments will be one key to success in the federal professional services market during the next five years.

This chapter discusses some of the conclusions that can be drawn from the findings of this report. These conclusions have been evaluated to develop strategic recommendations for vendors in the federal professional services market.

A

General Observations

The Year 2000 problem is the major issue and at the same time the major opportunity facing federal professional services vendors. With the cost of correcting this problem ranging anywhere from $2.3 billion to $30 billion, it is the wild card in the deck.

In its report, entitled *Getting Federal Computers Ready for 2000*, the Office of Management and Budget reported agency estimates of $2.3 billion to fix this problem. With the din of loud criticism in the background, the government has since publicly stated that this number is too low. OMB now asserts that this was a preliminary estimate and that more accurate estimates will become available after agencies complete the assessment phase.

With industry estimates ranging from $5.6 billion to as high as $30 billion, it is difficult to determine the real impact this issue will have on the professional services market. To be sure, those vendors who have positioned themselves to compete for this business by being on a GSA schedule as a Y2000 provider have a significant competitive advantage for the next three to four years.

It is clear in the current political environment that the money to fix this problem will first come from agency IT budgets and then from program budgets — at the expense of which programs is yet to be determined. Only if the cost to fix this problem approaches the high end of industry estimates will Congress consider special appropriations to supplement agency budgets. And that will only happen if mission-critical systems are faced with failure.

INPUT forecasts that the federal government will spend $9.2 billion on basic professional services from 1997 to 1999. This is generally the category of services that will be used to address Y2000 issues. INPUT estimates the cost to fix the Y2000 problem in the range of $8 billion to $10 billion with the contracted-out portion approximately 80% of that range.

Agencies will spend 20% — or $2 billion — of their total Y2000 costs on internal staff. This differs significantly from the commercial world, which will spend 29% of its total cost on internal staff. This difference is attributable to the substantial government downsizing that has occurred in the last several years and the lack of specific skills to address the Y2000 problem in federal agencies, generating a major opportunity for professional services vendors.

The net impact of this problem on the professional services market is that instead of a $9.2 billion market from 1997 to 1999, approximately $13.2 billion may be spent in the basic professional services mode. This level of expenditure could affect the other professional services modes, namely systems integration and outsourcing, but more than likely it will have an impact on primarily other service modes within the IT budget and other programs outside the IT budget.

B
Agency Perceptions

In this report INPUT looks at the agency perceptions of the advantages and disadvantages of vendor provided professional services along with vendor characteristics including vendor type, vendor qualifications, and vendor performance. In addition, INPUT reports on the agency suggestions on what vendors could do to make their services more valuable.

The following discussion and exhibits highlight findings from this study on the agency perceptions of the advantages and disadvantages of outsourcing professional services.

1. Advantages/Benefits of Professional Services

Federal agencies, both civilian and Defense, use professional services because they perceive vendor capability in offering experience and expertise that are not always extensively available within the agency. Professional services are also used because they give the agency the ability to balance workloads without increasing or decreasing government staff as requirements are added or removed. Furthermore, contract labor may be less expensive than government employee labor in performing the same task, and fixed-price contracting enables the government to place a ceiling on overall cost. The latter is particularly seen as advantageous by Defense agencies.

Objectivity, which includes the ability of the contractor to take an unbiased approach to a problem without being affected by internal agency politics, is also seen as essential. Civilian agencies also consider expedience a critical factor to their mission, something often seen as best provided by industry. Expedience can be measured in terms of accelerated schedules, as well as in terms of fewer problems with government rules, regulations and policies if the work were performed in-house.

Exhibit VII-1 highlights some of the basic advantages and benefits of professional services, which commonly hold true for civilian and Defense agencies. Some factors, such as expedience, are less important to DoD for a variety of reasons, such as longer-term mission and less external oversight.

Exhibit VII-1

Advantages/Benefits of Professional Services

❑   Expertise and Staff Skills

❑   Balanced Work Load

❑   Cost Effectiveness/Cost Saving

❑   Expedience

❑   Objectivity

❑   Staff Flexibility

❑   Advanced Technology

❑   Staff Experience

Source: INPUT

2.   Disadvantages/Liabilities of Professional Services

While many advantages and benefits are cited for contracting out professional services to vendors, agencies perceive disadvantages as well. Such disadvantages can largely be categorized as liability with the federal government.

The prevalent difficulty in managing contracts for professional services has historically been seen as a disadvantage and major liability by civilian agencies and DoD, primarily by the latter. Performance risk, or government agencies' concern that the contractor could not deliver or would deliver an unacceptable service, is considered a significant liability by civilian agencies. Adherence to schedule is also a factor.

The problems associated with procurement, including the lead time required for contracting and the risk of protest by losing or non-qualifying bidders, are also considered a disadvantage by agencies. The Clinger-Cohen Act, however, diminishes some of these perceptions with greater flexibility in procurement processes and regulations, notably in terms of the required lead time for acquisitions. Furthermore, the recent availability of services offered under GSA schedules is likely to significantly abate this concern among agencies and may further boost the addressable federal market for professional services — so long as vendors hold a schedule.

The learning curve, or the time it takes contractors to "come up to speed" on services required, is considered a problem especially among civilian agencies with shorter-term contracts. This is especially important on low-priced "boiler plate" contracts, where turnover rates are especially high.

Although agencies could not accomplish all of their assigned work without contractor support, becoming dependent on a contractor is also considered by some to be a disadvantage. The consensus of those who considered this a disadvantage is that contracting for professional services weakens agency ability to do further work because there is little spill-over of contractor expertise in a particular area of work. This also helps the contractor prolong services to the client.

Exhibit VII-2 provides an overview of key disadvantages of contracting for professional services as perceived by federal agencies. Though numerous, liabilities associated with professional services are generally outweighed by advantages — hence the growing federal market for such services.

Exhibit VII-2

Disadvantages/Liabilities of Professional Services

- ❏ Contract Management
- ❏ Procurement Process
- ❏ Contractor Learning Curve
- ❏ Performance Risk
- ❏ Cost Growth
- ❏ Contractor Dependence
- ❏ Loss of Staff Experience

Source: INPUT

3. Vendor Characteristics

Agencies also have differing views on vendor characteristics within the professional services market, citing both strengths and weaknesses. The following sections briefly describe key agency perceptions on preferred vendor types, vendor qualifications, past performance and basic advice to vendors.

a. Vendor Type

As made evident in the previous chapter, the professional services market consists of a large variety of vendor types. Ranging from aerospace firms to hardware and software companies, systems integrators and accounting firms, the competitive arena for federal professional services dollars is fair game to any vendor providing required services. Agencies have been known to award contracts to vendors with strong past performance records and occasionally with past agency experience, even if this means

going to a mainframe manufacturer for professional services. Competition does not always come from anticipated vendors.

The consensus among agencies on preferred organizations, however, favors those vendors that specialize in professional services as their main line of business. Though contingent on existing requirements and circumstances, agencies favor companies with broad professional services experience in order to customize services if and when requirements change. Documented experience to this end is a must in today's acquisition environment. Large companies will likely continue to gain ground in this market because of their broad human and capital assets, for which agencies are looking.

b. Vendor Qualifications

Agencies responding to INPUT's questionnaire ranked past performance above all others when asked about the importance of specified vendor qualifications in evaluating a professional services proposal. This should come as no surprise to vendors that have been following procurement reform and its impact on acquisition practices. With the alleviation of central procurement authority, agencies are exercising new powers to hedge against their perceived risks and liabilities as outlined above. Evaluating vendor past performance is considered one of the most reliable methods of ensuring a successful contract. Past performance records are particularly important when one realizes that agencies are able to, and do, consult with one another on vendor qualifications. It is crucial for vendors to perform in all areas of their contracts, but also with all of their clients. Poor performance at one agency will undoubtedly hinder the ability to win a bid at another.

Staff experience and the availability of multiple support functions is also key in winning a contract, which lends further support to agency preferences for utilizing vendors that offer professional services as their main line of business. While federal contract experience is relatively important to agencies, contract experience with the agency requiring services was ranked least important. Also of note is the low ranking of price in key vendor qualifications — signifying a major trend in the federal market. With greater government buying flexibility, vendors must realize that agencies are increasingly able to award contracts to the firms they desire, rather than solely to those with the lowest price, as was the case not long ago.

Key vendor qualifications, in decreasing order of perceived importance, are presented in Exhibit VII-3.

Exhibit VII-3

Key Vendor Qualifications

❏ Past Performance

❏ Staff Experience

❏ Support Functions

❏ Application Functional Experience

❏ Federal Contract Experience

❏ Software Development Experience

❏ Price

❏ Agency Experience

Source: INPUT

c. Vendor Performance

The perceptions that agency information resources management officials have of vendor performance in the federal professional services market are somewhat contradictory. Agency officials commented both on vendor weaknesses and strengths within specified contract performance measures.

Of particular note is the overall level of satisfaction with professional services vendors in the past. With "5" being very satisfied and "1" not satisfied at all, total satisfaction measured a mere 3.3 — only slightly higher than moderately satisfied. Within this measure, responsiveness to agency requirements was rated most satisfactory, but still at a low rating of 3.6. Past agency experience with project management and development visibility tied for last place with a 3.0. Stable and visible project management is a key criterion for selecting professional services firms, while it is also where most companies fail or are the weakest. Vendors competing for professional services contracts would be wise to market their company skills in all of these performance aspects, notably those that are perceived by agencies as most deficient.

Vendor performance measures are presented in Exhibit VII-4 in decreasing order of agencies' past satisfaction with them.

Exhibit VII-4

Key Vendor Performance Measures

❏ Responsiveness

❏ Quality of Work

❏ Cost

❏ Quantity of Work

❏ Delivery Schedule(s)

❏ Project Management

❏ Development Visibility

Source: INPUT

d. Agency Suggestions

When asked what they would like to see vendors do in the next several years to make their services more valuable, agencies commonly commented on those vendor characteristics made apparent by the above sections. In other words, since project management and development visibility ranked low in agency satisfaction, many agencies commented on their desire to see these characteristics improve. Similarly, since staff experience is a vital vendor characteristic, agencies recommend that vendors increase their experience while maintaining or reducing costs.

A common agency suggestion that reaches beyond the traditional is to increase teaming efforts to allow a greater range of services and bolster combined past performance records. Vendors must utilize new regulations that allow teaming in alternate venues of contracting, such as under GSA Federal Supply Schedules. Another key agency recommendation to vendors is to develop a stable service delivery process so that output becomes more reliable and predictable in terms of cost, schedule and performance. Furthermore, the continued implementation of the Clinger-Cohen Act throughout the federal government will require vendors to become intimately familiar with the procurement processes, specific requirements and pre-qualification guidelines within each agency, as they may be markedly different. The agency perspective — "know me and my requirements."

C
Recommendations

Prepare for more competition.

Competition will probably be the most important element of the federal professional services market over the next five years. The regulatory changes of the Clinger-Cohen Act and the changes in GSA's multiple award schedule program have greatly increased the level and changed the face of competition in the market.

Federal agencies are seeking easier ways of acquiring products and services in an attempt to save time and money by avoiding a long procurement cycle. They are showing increasing favor for GSA-sponsored programs such as the multiple award schedules for their low-risk, high-speed, cost-effective approach to procurement. This new competitive environment calls for several courses of action by federal vendors.

Increase marketing activities to develop strong agency relations, particularly with GSA.

Short-cycle procurements will increasingly be relationship buys. Agency officials will likely find themselves in purchasing situations where the only information they have is what they might remember from some marketing literature they read, or more likely, a conversation with a vendor representative. That background knowledge will greatly influence their purchasing decision.

Be alert for "blink and miss" opportunities.

New, short-cycle procurements will likely be competed with limited notice and be awarded very quickly. An example of this is the recent Information Research and Facilities Services procurement out of Commerce's Patent and Trademark Office (PTO). This program went from release of RFP to award in 15 weeks, a process that could have lasted 18 months only a year ago. These short-cycle procurements will become more common in all segments of the information technology market, including the professional services market.

Understand agency requirements and acquisition reforms.

The vendor who knows exactly what the agency needs and how the agency can best fulfill its requirement will be in a far better position to make the sale than the vendor who does not. Without the centralized procurement forces of the Brooks era, each agency is implementing its own acquisition models and set of preferences. Pre-qualification standards will also change from one agency to the next, and even from one procurement to the next. Learn them and cater to them.

Emphasize cost-effective solutions.

Though cost often ranks lower than factors such as past performance in evaluating bids, it will remain a key factor in the new procurement environment. A vendor's ability to present a total solution to an agency requirement and demonstrate the savings to be achieved through implementation of that solution will be a major selling point in the next five years.

Emphasize cost benefit analysis.

Federal agencies are very concerned with the direct cost benefits of technology implementation. Vendors must show their solutions as increasing an agency's mission effectiveness and provide clear cost justifications in order to maintain the market's healthy rate of growth. IT dollars must be perceived by agency decision-makers as investments rather than expenses.

Provide adaptive COTS products.

The federal government has a strong desire for commercial off-the-shelf products. However, these products must include the flexibility to be tailored to specific business functions. This will hold true even in the professional services market. More than 100 vendors now offer standardized services under a GSA schedule, giving them a significant competitive advantage in meeting many specific agency requirements. (See Appendix C.)

Get on a GSA schedule.

Vendors should look beyond the standard full and open competitive procurements for new business opportunities. Professional services vendors will find a strong market for their products through GSA schedules, particularly with BPAs, which agencies ranked almost as favorably as full and open competition as a means of procurement. Small businesses and 8(a) vendors should also push their presence in this market, since set-asides for such firms also ranked closely to full and open competition as a preferred acquisition method.

Once on a schedule, do not wait for the orders to come rolling in. Continue to market your product and services. Be particularly aware of and utilize eased regulations to make products more attractive to agencies, such as spot price reductions and teaming arrangements under a schedule. This concept also holds true for more traditional IDIQ buys — winning a contract does not equate to winning the dollars.

Service emerging technologies.

The successful professional services vendor must also stay abreast of emerging technologies and be able to provide customized services based on agency requirements. The IT market is more dynamic than ever, with application life-cycles increasingly shortened. Most notably, education and training services must be refreshed on a constant basis. According to several recent surveys, federal CIOs have ranked the following technologies as most critical to agency missions:

❑ Internet/Intranet/Web

❑ Security Technology

❑ Electronic Commerce/Electronic Data Interchange

❑ Distributed Computing

❑ Data Warehousing

❑ Client-Server Computing

❑ Workflow/Document Management

❑ Electronic Information Services

❑ Groupware

❑ Relational Databases

Broaden market focus.

To capitalize on the federal professional services market to the maximum extent, vendors may consider broadening their services base and pursuing both civilian and Defense opportunities, if they are not already doing so. The vendor analysis presented in chapter VI makes clear the fact that leading professional services firms have the capability of offering multiple and flexible services to meet total solution requirements of the agencies. Also, though civilian agencies command the greatest share of the professional services market and will likely witness stronger growth, DoD still comprises a major portion of the current opportunities. If possible, vendors should not limit themselves to one realm over the other.

Engage CIOs and other agency decision-makers.

CIOs will be the primary shapers of the professional services market of tomorrow. This force is too great to neglect by any professional services vendor. Vendors must develop meaningful relationships with CIOs and other key decision-makers in each agency. Not only will this factor be critical for future projects, it will also be instrumental in deciding the fate of existing contracts and initiatives. Get into the mindset of the CIOs and understand their requirements from their perspective, not necessarily only from the perspective of a vendor.

In today's procurement environment, agency end-users must also not be overlooked. While they may not make decisions for the large IT buys, the advent of schedules and federal credit cards make end-users a force to be reckoned with. The holder of the credit card ultimately makes the decision on what to purchase and from what vendor to purchase it.

D
Closing Remarks

All of the above recommendations will help vendors maintain their competitive edge to take them into the twenty-first century. The federal professional services market is in a state of change because of the federal acquisition reforms of 1996. This state of flux has created a degree of uncertainty that makes clear predictions and forecasts of the market and its future composition difficult at best. One of the few things that can be asserted with confidence is that this market will change significantly over the next five years, but will enjoy consistent growth.

This federal professional services market is clearly a very healthy segment of the total federal information technology market. The market is enjoying the force of federal staff reductions and new initiatives as major driving factors, which will continue at least over the next five years. Factors do exist that are inhibiting market growth, but with targeted marketing efforts, they can either be compensated for or eliminated. As a result, the current federal professional services market presents excellent opportunities for all services vendors and should be a very profitable area of IT business development.

A
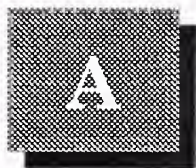
Definitions

The definitions in this appendix accommodate the range of information services described in this report, as well as services not covered by this report to establish an analytical framework. An overview of INPUT's regular terms of reference is presented in Exhibit A-1. The first three delivery modes shown — systems software, applications software and turnkey systems — are not defined in further detail here because they are not covered under this report.

The federal government's unique, non-technical terminology, associated with applications, documentation, budgets, authorization and the procurement/acquisition process, is included in Appendix B, Glossary of Federal Acronyms.

A
Overall Definitions and Analytical Framework

Information Services. Include computer/telecommunications-related products and services that are oriented toward the development or use of information systems. Information services typically involve one or more of the following:

❏ Processing of specific applications using vendor-provided systems (called *Processing Services*)

❏ A combination of hardware, packaged software and associated support services that will meet a specific application processing need (called *Turnkey Systems*)

❏ Packaged software (called *Software Products*)

❏ People services that support users in developing and operating their own information systems (called *Professional Services*)

❏ Bundled combinations of products and services in which the vendor assumes responsibility for the development of a custom solution to an information system problem (called *Systems Integration*)

❏ Services that provide operation and management of all or a significant part of a user's information systems functions under a long-term contract (called *Systems Operations*)

❏ Services associated with the delivery of information in electronic form, typically network-oriented services such as value-added networks, electronic mail and document interchange, on-line databases, on-line news and data feeds, video text, etc. (called *Network Services*)

In general, the market for information services does not involve providing equipment to users. The exception is the case in which the equipment is bundled as part of an overall service offering such as a turnkey system, a systems operations contract, or a systems integration project.

The information services market also excludes pure data transport services (e.g., data or voice communications circuits). However, where information transport is associated with a network-based service (e.g., EDI or VAN services), or cannot be feasibly separated from other bundled services (e.g., some systems operations contracts), the transport costs are included as part of the services market.

The analytical framework of the *Information Services Industry* consists of the following interacting factors: overall and industry-specific business environment (trends, events and issues); technology environment; user information system requirements; size and structure of information services markets; vendors and their products, services and revenues; distribution channels; and competitive issues.

All *Information Services* Market forecasts are estimates of User Expenditures for information services. When questions arise about the proper place to count these expenditures, INPUT addresses them from the user's viewpoint: expenditures are categorized according to what users perceive they are buying.

By focusing on user expenditures, INPUT avoids two problems that are related to the distribution channels for various categories of services:

❏ Double counting, which can occur by estimating total vendor revenues when there is significant reselling within the industry (e.g., software sales to turnkey vendors for repackaging and resale to users)

❏ Missed counting, which can occur when sales to users go through indirect channels such as mail order retailers

Product/Service Markets are defined as specific products and services that satisfy a given user need. While Market Sectors specify who the buyer is, *Product/Service Markets* specify what the user is buying.

Of the eight delivery modes defined by INPUT, five are considered primary products or services:

❏ Processing Services

❏ Network Services

❏ Professional Services

❏ Applications Software Products

❏ Systems Software Products

The remaining three delivery modes represent combinations of these products and services, bundled together with equipment, management and/or other services:

❏ Turnkey Systems

❏ Systems Operations

❏ Systems Integration

Section B describes the delivery modes and their structure in more detail.

Outsourcing is defined as the contracting of IS functions to outside vendors. Outsourcing should be viewed as the opposite of insourcing: anything that IS management has considered feasible to do internally (e.g., data center operations, applications development and maintenance, network management, training, etc.) is a potential candidate for outsourcing.

IS management has always bought systems software because it is unfeasible for companies to develop it internally. However, all other delivery modes represent functions or products that IS management could choose to perform or develop in-house. Viewed this way, outsourcing is the result of a make-or-buy decision, and the outsourcing market covers any product or service for which the vendor must compete against the client firm's own internal resources.

B
Industry Structure and Delivery Modes

1. Service Categories

Exhibit A-1 presents the structure of the information services industry. Several of the delivery modes can be grouped into higher-level Service Categories, based on the kind of problem the user needs to solve. These categories are:

❑ *Business Application Solutions (BAS)*—are prepackaged or standard solutions to common business applications. These applications can be either industry-specific (e.g., mortgage loan processing for a bank), cross-industry (e.g., payroll processing) or generic (e.g., utility time sharing). In general, BAS services involve minimal customization by the vendor and allow the user to handle a specific business application without having to develop or acquire a custom system or system resources. The following delivery modes are included under BAS:

⇒ Processing Services

⇒ Applications Software Products

⇒ Turnkey Systems

❑ *Systems Management Services (SMS)*—are services that assist users in developing systems or operating/managing the information systems function. Two key elements of SMS are the customization of the service to each individual user and/or project and the potential for the vendor to assume significant responsibility for management of at least a portion of the user's information systems function. The following delivery modes are included under SMS:

⇒ Systems Operations

⇒ Systems Integration

Each of the remaining three delivery modes represents a separate service category:

❑ Professional Services

❑ Network Services

❑ Systems Software Products

Note: These service categories are a new concept introduced in 1990. They are purely an aggregation of lower-level delivery mode data and do not change the underlying delivery modes or industry structure.

Exhibit A-1

Information Services Industry Structure

Systems Software	Applications Software	Turnkey Systems	Professional Services	Systems Integration	Outsourcing	Processing Services	Network Services (including Internet)	Equipment Services
Systems Control	Enterprise Servers	Equipment	IS Consulting	Equipment	Platform	Transaction	Electronic Information Services	Enterprise Servers
Operations Management	Departmental Servers	Software Products	Education & Training	Software Products	Applications	Utility	Network Applications	Departmental Servers
Applications Development Tools	Clients	Professional Services	Software Development	Professional Services	Desktop Services	Other		Clients
Database Management				Other	Network Management			Environmental Services
					Applications Management			
					Business Operations			

2. Processing Services

This category includes transaction processing, utility processing and other processing services.

❑ *Transaction Processing* - A client uses vendor-provided information systems including hardware, software and/or data networks at the vendor's site or the customer's site to process transactions and update client databases. Transactions may be entered in one of four modes:

⇒ *Interactive* - Characterized by the interaction of the users with the system for data entry, transaction processing, problem solving and report preparation: the user is on-line to the programs/files stored on the vendor's system

⇒ *Remote Batch* - When the user transmits batches of transaction data to the vendor's system, the vendor is allowed to schedule job execution according to overall client priorities and resource requirements

⇒ *Distributed Services* - Users maintain portions of an application database and enter or process some transaction data at their own site, while also being connected through communications networks to the vendor's central systems for processing other parts of the application

⇒ *Carry-in Batch* - Users physically deliver work to a processing services vendor

❑ *Utility Processing* - Vendor provides basic software tools (language compilers, assemblers, DBMSs, graphics packages, mathematical models, scientific library routines, etc.), generic applications programs and/or databases, enabling clients to develop their own programs or process data on vendor's system

❑ *Other Processing Services* - Vendor provides services, usually at vendor site, such as scanning and other data entry services, laser printing, computer output microfilm (COM), CD preparation and other data output services, backup and disaster recovery, etc.

3. Systems Operations

Systems operations involves the operation and management of all or a significant part of the user's information systems functions under a long-term contract. These services can be provided in either of two distinct submarkets:

❑ *Professional Services* - The vendor provides personnel to operate client-supplied equipment. Prior to 1990, this was a submode of the Professional Services product/service market

❑ *Processing Services* - The vendor provides personnel, equipment and (optionally) facilities. Prior to 1990, this was a submode of the Processing Services product/service market

Systems operations vendors now provide a wide variety of services in support of existing information systems. The vendor can plan, control, provide, operate, maintain and manage any or all components of the user's information systems (equipment, networks, systems and/or application software), either at the client's site or the vendor's site. Systems operations can also be referred to as "resource management" or "facilities management."

There are two general levels of systems operations:

❑ *Platform / Network Operations* - The vendor operates the computer system and/or network without taking responsibility for the applications

❑ *Application Operations* - The vendor takes responsibility for the complete system, including equipment, associated telecommunications networks and applications software

Note: Systems Operations was introduced as a delivery mode in 1990.

4.   Systems Integration (SI)

Systems integration is a business offering that provides a complete solution to an information system, networking or automation requirements through the custom selection and implementation of a variety of information system products and services. A systems integrator is responsible for the overall management of a systems integration contract and is the single point of contact and responsibility to the buyer for the delivery of the specified system function, on schedule and at the contracted price.

To be included in the information services market, systems integration projects must involve some application processing component. In addition, the majority of cost must be associated with information systems products and/or services.

The systems integrator will perform, or manage others who perform, most or all of the following functions:

❑ Program management, including subcontractor management

❑ Needs analysis

❑ Specification development

❑ Conceptual and detailed systems design and architecture

❑ System component selection, modification, integration and customization

❑ Custom hardware and software design and development

❑ Systems implementation, including testing, conversion and post-implementation evaluation and tuning

❑ Life cycle support, including:

    ⇒ System documentation and user training

    ⇒ Systems operations during development

    ⇒ Systems maintenance

    ⇒ Financing

5. Basic Professional Services

This category includes consulting, education and training, and software development:

❑ *Consulting* - These services include management consulting (related to information systems), information systems consulting, feasibility analysis and cost-effectiveness studies and project management assistance. Services may be related to any aspect of information systems, including equipment, software, networks and systems operations

❑ *Education and Training* - Products and services related to information systems and services for the professional end user, including computer-aided instruction, computer-based education and vendor instruction of user personnel in operations, design, programming and documentation

❑ *Software Development* - Services include user requirements definition, systems design, contract programming, documentation and implementation of software performed on a custom basis. Conversion and maintenance services are also included

6. Network Services

Network services typically include a wide variety of network-based functions and operations. Their common thread is that most of these functions could not be performed without network involvement. Network services is divided into two major segments: Electronic Information Services, which involve selling information to the user, and Network Applications, which involve providing some form of enhanced transport service in support of a user's information processing needs.

❑ *Electronic Information Services* - Electronic information services are databases that provide specific information via terminal- or computer-based inquiry, including items such as stock prices, legal precedents, economic indicators, periodical literature, medical diagnoses, airline schedules, automobile valuations, etc. The terminals used may be computers themselves, such as communications servers or personal computers. Users typically inquire into and extract information from the databases. Although users may load extracted data into their own computer systems, the electronic information vendor provides no data processing or manipulation capability and the users cannot update the vendor's databases.

The two kinds of electronic information services are:

⇒ *On-line Databases* - These are structured, primarily numerical data on economic and demographic trends, financial instruments, companies, products, materials, etc.

⇒ *News Services* - Includes unstructured, primarily textual information on people, companies, events, etc.

While electronic information services have traditionally been delivered via networks, there is a growing trend toward the use of CD ROM optical disks to support or supplant on-line services, and these optical disk-based systems are included in the definition of this delivery mode.

❑ *Network Applications* - Network applications are defined by the following submodes:

⇒ *Value-Added Network Services* (VAN Services) - VAN services are enhanced transport services that involve adding such functions as automatic error detection and correction, protocol conversion and store-and-forward message switching to the provision of basic network circuits.

Originally, VAN services were provided solely by specialized VAN carriers (Tymnet, Telenet, etc.). Today these services are also

offered by traditional common carriers (AT&T, Sprint, etc.). Meanwhile, the VAN carriers have also branched into the traditional common carriers' markets and are offering unenhanced basic network circuits as well.

INPUT's market definition covers VAN services only, but includes the VAN revenues of all types of carriers.

⇒ *Electronic Data Interchange* (EDI) - Includes application-to-application exchange of standardized business documents between trade partners or facilitators. This exchange is commonly performed using VAN services. Specialized translation software is typically employed to convert data from organizations' internal file formats to EDI interchange standards; this software may be provided as part of the VAN service or may be resident on the organization's own computers.

⇒ *Electronic Information Exchange* (EIE) - Also known as Electronic Mail (e-mail), EIE involves the transmission of messages across an electronic network managed by a services vendor, including facsimile transmission (FAX), voice mail, voice messaging, and access to Telex, TWX and other messaging services. This also includes bulletin board services.

⇒ *Other Network Services* - This segment contains video text and pure network management services. Video text is actually more a delivery mode than an application. Its prime focus is on the individual as a consumer or in business. These services provide interactive access to databases and offer the inquirer the capability to send as well as receive information for such purposes as home shopping, home banking, travel reservations, etc.

Network management services included here must involve the vendor's network and network management systems as well as people. People-only services, or services that involve the management of networks as part of the broader task of managing a user's information processing functions are included in Systems Operations.

B
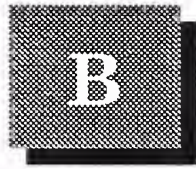
Glossary of Federal Acronyms

The federal government's procurement language uses a combination of abbreviations, acronyms, phrases and words that is complicated by different agency definitions and interpretations. The government also uses terms of accounting, business, economics, engineering and law with new applications and technology.

Abbreviations and contract terms that INPUT encountered most often in program documentation and interviews for this report are included here, but this glossary should not be considered all-inclusive. Federal procurement regulations (DAR, FPR, FAR, FIRMR, FPMR) and contract terms listed in RFIs, RFPs, and RFQs provide applicable terms and definitions.

Federal agency abbreviations have been included to the extent they are employed in this report.

A

Federal Agency Acronyms

8(a) Set-Aside	Agency awards direct to Small Business Administration for direct placement with a small, socially/economically disadvantaged company
AAS	Automatic Addressing System
AATMS	Advanced Air Traffic Management System
ACS	Advanced Communications Satellite (formerly NASA 30/20 GHz Satellite Program)
ACT-1	Advanced Computer Techniques (Air Force)
ACWP	Actual Cost of Work Performed
Ada	DoD high-order language

ADA	Airborne Data Acquisition
ADL	Authorized Data List
ADNET	Anti-Drug Network
ADS	Automatic Digital Switches (DCS)
AFA	Air Force Association
AFCEA	Armed Forces Communications Electronics Association
AGE	Aerospace Ground Equipment
AIP	Array Information Processing
AIPC	Automated Information Processing Center
AIS	Automated Information System
AMD	Acquisition Management Directorate
AMPE	Automated Message Processing Equipment
AMPS	Automated Message Processing System
AMSDL	Acquisition Management Systems Data List
AP(P)	Advance Procurement Plan
Appropriation	Congressionally approved funding for authorized programs and activities of the Executive Branch
APR	Agency Procurement Request
ARB	Acquisition Review Board
ARPA	Advanced Research Projects Agency
ARPANET	ARPA network of scientific computers
ASP	Aggregated Switch Procurement
ASR	Acquisition Strategy Report
ATLAS	Abbreviated Test Language for All Systems (for ATE Automated Test Equipment)

Authorization	In the legislative process programs, staffing and other routine activities must be approved by Oversight Committees before the Appropriations Committee will approve the money from the budget
AUSA	Association of the U.S. Army
BA	Basic Agreement or Budget Authority
BAFO	Best And Final Offer
Base level	Procurement, purchasing, and contracting at the military installation level
BCA	Board of Contract Appeals
BCE	Baseline Cost Estimate
Benchmark	Method of evaluating ability of a candidate computer system to meet user requirements
Bid protest	Objection (in writing, before or after contract award) to some aspect of a solicitation by a valid bidder
BML	Bidders Mailing List of qualified vendor information filed annually with federal agencies to automatically receive RFPs and RFQs in areas of claimed competence
BOA	Basic Ordering Agreement
B&P	Bid and Proposal vendor activities in response to government solicitation/specific overhead allowance
BPA	Blanket Purchase Agreement
Budget	Federal Budget, proposed by the President and subject to Congressional review
BY	Budget Year or Base Year
C2	Command and Control
C3	Command, Control and Communications
C4	Command, Control, Communications and Computers
C3I	Command, Control, Communications and Intelligence
CAB	Contract Adjustment Board or Contract Appeals Board

CADE	Computer-Aided Design and Engineering
CADS	Computer-Assisted Display Systems
CAIS	Computer-Assisted Instruction System
CALS	Continuous Acquisition and Life-cycle Support (formerly Computer-Aided Acquisition and Logistics Support)
CAPS	Command Automation Procurement Systems
CAS	Contract Administration Services or Cost Accounting Standards
CASB	Cost Accounting Standards Board
CASP	Computer-Assisted Search Planning
CBD	(Commerce Business Daily) U.S. Department of Commerce publication listing government contract opportunities and awards
CBO	Congressional Budget Office
CCEP	Commercial Comsec Endorsement Program
CCDR	Contractor Cost Data Reporting
CCN	Contract Change Notice or Configuration Change Notice
CCPDS	Command Center Processing and Display Systems
CCPO	Central Civilian Personnel Office
CDA	Central Design Activity
CDR	Critical Design Review
CDRL	Contractor Data Requirement List
CFE	Contractor-Furnished Equipment
CFM	Contractor Furnished Material
CFR	Code of Federal Regulations
CIA	Central Intelligence Agency
CICA	Competition in Contracting Act (1984)

CIG	Computerized Interactive Graphics
CIM	Corporate Information Management or Center for Information Management
CINCs	Commanders-in-Chief
CIR	Cost Information Reports
CM	Configuration Management
CMI	Computer-Managed Instruction
CNI	Communications, Navigation and Identification
CO	Contracting Office, Contract Offices, Contracting Officer or Change Order
COC	Certificate of Competency (administered by the Small Business Administration) or Certificate of Compliance
COCO	Contractor-Owned, Contractor-Operated
CODSIA	Council of Defense and Space Industry Associations
COMSAT	Communications Satellite Corporation
CONUS	Continental United States
COP	Capability Objective Package
COSMIC	Computer Software Management Information Center (NASA)
COTR	Contracting Officer's Technical Representative
COTS	Commercial Off-The-Shelf (Commodities)
CPAF	Cost-Plus-Award-Fee Contract
CPFF	Cost-Plus-Fixed-Fee Contract
CPIF	Cost-Plus-Incentive-Fee Contract
CPR	Cost Performance Reports
CPSR	Contractor Procurement System Review
CR	Cost Reimbursement (Cost-Plus Contract)

CSIF	Communications Services Industrial Fund
C/SCSC	Cost/Schedule Control System Criteria (also called "C-Spec")
CWAS	Contractor Weighted Average Share in Cost Risk
CWBS	Contract Work Breakdown Structure
DAB	Defense Acquisition Board
DABBS	Defense Acquisition Bulletin Board System
DAC	Defense Acquisition Circular
DAL	Data Accession List
DAR	Defense Acquisition Regulations
DARC	Defense Acquisition Regulatory Council
DAS	Data Acquisition System
DBHS	Data Base Handling System
DBOF	Defense Business Operating Fund
DCAA	Defense Contract Audit Agency
DCAS	Defense Contract Administration Services
DCASR	DCAS Region
DCC	Digital Control Computer
DCS	Defense Communications System
DDA	Dynamic Demand Assessment (Delta Modulation)
DDC	Defense Documentation Center
DDL	Digital Data Link - A segment of a communications network used for data transmission in digital form
DDS	Defense Distribution System
DECCO	Defense Commercial Communications Office
DECEO	Defense Communications Engineering Office

D&F	Determination and Findings - required documentation for approval of a negotiated procurement
DFARS	DoD FAR Supplement
DFAS	Defense Finance and Accounting Service
DIA	Defense Intelligence Agency
DISA	Defense Information Systems Agency (Formerly DCA)
DHHS	Department of Health and Human Services
DIDS	Defense Integrated Data Systems
DISC	Defense Industrial Supply Center
DITSO	Defense Information Technology Systems Office
DLA	Defense Logistics Agency
DMA	Defense Mapping Agency
DMR	Defense Management Review
DMRD	Defense Management Review Decision
DNA	Defense Nuclear Agency
DO	Delivery Order
DOC	Department of Commerce
DoD	Department of Defense
DoDD	Department of Defense Directive
DOE	Department of Energy
DOI	Department of Interior
DOJ	Department of Justice
DOS	Department of State
DOT	Department of Transportation
DNA	Defense Nuclear Agency

DPA	Delegation of Procurement Authority (granted by GSA under FPRs)
DPC	Defense Procurement Circular
DPF	Defense Processing Facility
DQ	Definite Quantity Contract
DQ/PL	Definite Quantity/Price List Contract
DR	Deficiency Report
DRFP	Draft Request For Proposal
DSCS	Defense Satellite Communication System
DSN	Defense Switched Network
DSP	Defense Support Program (WWMCCS)
DSS	Defense Supply Service
DTC	Design-To-Cost
DTIC	Defense Technical Information Center
DTN	Defense Transmission Network
DVA	Department of Veterans Affairs
ECP	Engineering Change Proposal
ED	Department of Education
EEO	Equal Employment Opportunity
EMC	Electro-Magnetic Compatibility
EMCS	Energy Monitoring and Control System
EO	Executive Order issued by the President
EOQ	Economic Ordering Quantity
EPA	Economic Price Adjustment or Environmental Protection Agency
EPMR	Estimated Peak Monthly Requirement

EPS	Emergency Procurement Service (GSA) or Emergency Power System
ETR	Estimated Time to Repair
ESTSC	Energy Science and Technology Software Center (DOE)
FA	Formal Advertising
FAA	Federal Aviation Administration
FAC	Federal Acquisition Circular
FAR	Federal Acquisition Regulations
FCA	Functional Configuration Audit
FCC	Federal Communications Commission
FCDC	Federal Contract Data Center
FCPC	Federal Computer Products Center
FCRC	Federal Contract Research Center
FDR	Formal Design Review
FEDSIM	Federal (Computer) Simulation Center (GSA)
FEMA	Federal Emergency Management Agency
FFP	Firm Fixed-Price Contract (also Lump Sum Contract)
FFRDC	Federally Funded Research & Development Center
FIPR	Federal Information Processing Resource
FIPS	Federal Information Processing Standard
FIPS PUBS	FIPS Publications
FIRMR	Federal Information Resource Management Regulations
FMS	Foreign Military Sales
FOC	Full Operating Capability
FOIA	Freedom of Information Act

FP	Fixed-Price Contract
FPAF	Fixed-Price Award Fee
FPIF	Fixed-Price Incentive Fee
FP-L/H	Fixed-Price Labor/Hour Contract
FP-LOE	Fixed-Price Level-Of-Effort Contract
FDPC	Federal Data Processing Center
FPMR	Federal Property Management Regulations
FPR	Federal Procurement Regulations
FSC	Federal Supply Classification
FSG	Federal Supply Group
FSN	Federal Stock Number
FSS	Federal Supply Schedule or Federal Supply Service (GSA)
FSTS	Federal Secure Telecommunications System
FT Fund	A revolving fund, designated as the Federal Telecommunications Fund, used by GSA to pay for GSA-provided common-user services, specifically including the current FTS and proposed FTS2000 services
FTSP	Federal Telecommunications Standards Program administered by NCS; Standards are published by GSA
FTS	Federal Telecommunications System, especially FTS2000
FY	Fiscal Year
FYDP	Five-Year Defense Plan
G&A	General and Administrative (Expense)
GAO	General Accounting Office
GFE	Government-Furnished Equipment
GFM	Government-Furnished Material
GFY	Government Fiscal Year (October to September)

GIDEP	Government-Industry Data Exchange Program
GOCO	Government Owned, Contractor Operated
GOGO	Government Owned, Government Operated
GOSIP	Government Open Systems Interconnection Profile
GPO	Government Printing Office
GPS	Global Positioning System
GRH	Gramm-Rudman-Hollings Act (1985), also called Gramm-Rudman Deficit Control
GSA	General Services Administration
GSBCA	General Services Administration Board of Contract Appeals
HAC	House Appropriations Committee
HASC	House Armed Services Committee
HCFA	Health Care Financing Administration
HHS	(Department of) Health and Human Services
HOL	Higher Order Language
HSDP	High-Speed Data Processors
HUD	(Department of) Housing and Urban Development
I-CASE	Integrated Computer-Aided Software Engineering
ICA	Independent Cost Analysis
ICAM	Integrated Computer-Aided Manufacturing
ICE	Independent Cost Estimate
ICP	Inventory Control Point
ICST	Institute for Computer Sciences and Technology, National Institute of Standards and Technology, Department of Commerce
IDA	Institute for Defense Analysis
IDAMS	Image Display And Manipulation System

IDEP	Interservice Data Exchange Program
IDIQ	Indefinite Delivery, Indefinite Quantity
IDN	Integrated Data Network
IFB	Invitation For Bids
IOC	Initial Operating Capability
IOI	Internal Operating Instructions
IPS	Integrated Procurement System
IQ	Indefinite Quantity Contract
IR&D	Independent Research & Development
IRM	Information Resources Management
IXS	Information Exchange System
IV&V	Independent Verification & Validation
JCS	Joint Chiefs of Staff
JCALS	Joint Computer-Aided Acquisition and Logistics Support
JFMIP	Joint Financial Management Improvement Program
JPO	Joint Program Office
JSIPS	Joint Systems Integration Planning Staff
JSOP	Joint Strategic Objectives Plan
JSOR	Joint Service Operational Requirement
JUMPS	Joint Uniform Military Pay System
JWAM	Joint WWMCCS ADP Modernization (Program)
LC	Letter Contract
LCC	Life Cycle Cost
LCMP	Life Cycle Management Procedures (DD7920.1)
LCMS	Life Cycle Management System

L-H	Labor-Hour Contract
LOI	Letter of Intent; Letter of Instruction
LRPE	Long-Range Procurement Estimate
LRIRP	Long-Range Information Resource Plan
LTD	Live Test Demonstration
LSI	Large-Scale Integration
MAISRC	Major Automated Information Systems Review Council (DoD)
MANTECH	Manufacturing Technology
MAPS	Multiple Address Processing System
MAP/TOP	Manufacturing Automation Protocol/Technical and Office Protocol
MASC	Multiple Award Schedule Contract
MDA	Multiplexed Data Accumulator
MENS	Mission Element Need Statement or Mission Essential Need Statement (see DD-5000.1 Major Systems Acquisition)
MILSCAP	Military Standard Contract Administration Procedures
MIL SPEC	Military Specification
MIL STD	Military Standard
MIPR	Military Interdepartmental Purchase Request
MLS	Multilevel Security
MNF	Multi-National Force
MOD	Modification
MOL	Maximum Ordering Limit (Federal Supply Service)
MPC	Military Procurement Code
MTBF	Mean-Time-Between-Failures
MTTR	Mean-Time-To-Repair

MYP	Multi-Year Procurement
NARDIC	Navy Research and Development Information Center
NASA	National Aeronautics and Space Administration
NCA	National Command Authorities
NCMA	National Contract Management Association
NCS	National Communications System (evolving to DISN)
NDI	Non-Development Item
NICRAD	Navy-Industry Cooperative Research and Development
NIP	Notice of Intent to Purchase
NIST	National Institute of Science and Technology (was NBS)
NMCS	National Military Command System
NSA	National Security Agency
NSEP	National Security and Emergency Preparedness
NSF	National Science Foundation
NSIA	National Security Industrial Association
NTIA	National Telecommunications and Information Administration, Department of Commerce
NTIS	National Technical Information Service
Obligation	"Earmarking" of specific funding for a contract from committed agency funds
OA	Obligational Authority
OCS	Office of Contract Settlement
OFCC	Office of Federal Contract Compliance
Off-Site	Services to be provided near but not in government facilities
FMP	Office of Federal Management Policy (GSA)
OFPP	Office of Federal Procurement Policy

OIRM	Office of Information Resources Management
O&M	Operations & Maintenance
OMB	Office of Management and Budget
O,M&R	Operations, Maintenance and Readiness
On-Site	Services to be performed on a government installation or in a specified building
OPM	Office of Procurement Management (GSA) or Office of Personnel Management
Options	Sole-source additions to the base contract for services or goods to be exercised at the government's discretion
OSADBU	Office of Small and Disadvantaged Businesses
OSHA	Occupational Safety and Health Act
OSI	Open System Interconnect
OSP	Offshore Procurement
OTA	Office of Technology Assessment (Congress)
Outyear	Proposed funding for fiscal years beyond the budget year (next fiscal year)
P-1	FY Defense Production Budget
P3I	Pre-Planned Product Improvement (program in DoD)
PAR	Procurement Authorization Request or Procurement Action Report
PAS	Pre-Award Survey
PASS	Procurement Automated Source System
PCO	Procurement Contracting Officer
PDA	Principal Development Agency
PDM	Program Decision Memorandum
PDR	Preliminary Design Review
PIR	Procurement Information Reporting

PME	Performance Monitoring Equipment
PMP	Purchase Management Plan
PO	Purchase Order or Program Office
POE	Panel Of Experts
POM	Program Objective Memorandum
POSIX	Portable Open System Interconnection Exchange
POTS	Purchase of Telephone Systems
PPBS	Planning, Programming, Budgeting System
PR	Purchase Request or Procurement Requisition
PRA	Paperwork Reduction Act
PS	Performance Specification alternative to a Statement of Work, when work to be performed can be clearly specified
QA	Quality Assurance
QAO	Quality Assurance Office
QBL	Qualified Bidders List
QMCS	Quality Monitoring and Control System (DoD software)
QMR	Qualitative Material Requirement (Army)
QPL	Qualified Products List
QRC	Quick Reaction Capability
QRI	Quick Reaction Inquiry
R-1	FY Defense RDT&E Budget
RAM	Reliability, Availability and Maintainability or Random Access Memory
RC	Requirements Contract
R&D	Research and Development
RDA	Research, Development and Acquisition

RDD	Required Delivery Date
RD&E	Research, Development and Engineering
RDF	Rapid Deployment Force
RDT&E	Research, Development, Test and Engineering
RFB	Request For Bid
RFI	Request For Information
RFP	Request For Proposal
RFQ	Request For Quotation
RFTP	Request For Technical Proposals (Two-Step)
ROC	Required Operational Capability
ROI	Return On Investment
RSI	Rationalization, Standardization and Interoperability
RTAS	Real-Time Analysis System
RTDS	Real-Time Display System
SA	Supplemental Agreement
SAC	Senate Appropriations Committee
SADBU	Small and Disadvantaged Business Utilization
SAR	Selected Acquisition Report
SASC	Senate Armed Services Committee
SBA	Small Business Administration
SB Set-Aside	Small Business Set-Aside contract opportunities with bidders limited to certified small businesses
SCA	Service Contract Act (1964 as amended)
SCN	Specification Change Notice
SDB	Small/Disadvantaged Business

SDI	Strategic Defense Initiative
SDIO	Strategic Defense Initiative Office
SDN	Secure Data Network
SDR	System Design Review
SEC	Securities and Exchange Commission
SE&I	Systems Engineering and Integration
SETA	Systems Engineering/Technical Assistance
SETS	Systems Engineering/Technical Support
SIBAC	Simplified Intragovernmental Billing and Collection System
SIC	Standard Industrial Classification
SIMP	Systems Integration Master Plan
SIOP	Single Integrated Operations Plan
Sole Source	Contract award without competition
Solicitation	Invitation to submit a bid
SOR	Specific Operational Requirement
SOW	Statement of Work
SSA	Source Selection Authority (DoD) or Social Security Administration
SSAC	Source Selection Advisory Council
SSEB	Source Selection Evaluation Board
SSO	Source Selection Official (NASA)
STINFO	Scientific and Technical Information Program Air Force/NASA
STU	Secure Telephone Unit
SWO	Stop-Work Order

Synopsis	Brief description of contract opportunity in CBD after D&F and before release of solicitation
TA/AS	Technical Assistance/Analysis Services
TCP/IP	Transmission Control Protocol/Internet Protocol
TEMPEST	Studies, inspections and tests of unintentional electromagnetic radiation from computer, communication, command and control equipment that may cause unauthorized disclosure of information; usually applied to DoD and security agency testing programs
TILO	Technical and Industrial Liaison Office, Qualified Requirement Information Program, Army
TM	Time and Materials contract
TOA	Total Obligational Authority (Defense)
TOD	Technical Objective Document
TQM	Total Quality Management
TR	Temporary Regulation (added to FPR, FAR)
TRACE	Total Risk Assessing Cost Estimate
TRCO	Technical Representative of the Contracting Offices
TREAS	Department of Treasury
TRM	Technical Reference Model
TRP	Technical Resources Plan
TVA	Tennessee Valley Authority
UCAS	Uniform Cost Accounting System
UPS	Uniform Procurement System
USA	U.S. Army
USAF	U.S. Air Force
USC	United States Code
USCG	U.S. Coast Guard

USMC	U.S. Marine Corps
USN	U.S. Navy
USPS	United States Postal Service
USRRB	United States Railroad Retirement Board
VA	Veterans Affairs Department
VE	Value Engineering
VHSIC	Very High-Speed Integrated Circuits
VIABLE	Vertical Installation Automation Baseline (Army)
VICI	Voice Input Code Identifier
VTC	Video Teleconferencing
WAM	WWMCCS ADP Modernization Program
WBS	Work Breakdown Structure
WGM	Weighted Guidelines Method
WIN	WWMCCS Intercomputer Network
WITS	Washington Interagency Telecommunications System
WIS	WWMCCS Information Systems
WPI	Wholesale Price Index
WS	Work Statement Offeror's description of the work to be done (proposal or contract)
WWMCCS	WorldWide Military Command and Control System

B

General and Industry Acronyms

ADP	Automatic Data Processing
ADPE	Automatic Data Processing Equipment
ANSI	American National Standards Institute
BOC	Bell Operating Company

CAD	Computer-Aided Design
CAM	Computer-Aided Manufacturing
CASE	Computer-Aided Software Engineering
CBEMA	Computer and Business Equipment Manufacturers Association
CCIA	Computers and Communications Industry Association
CCITT	Comite Consultatif Internationale de Télégraphique et Téléphonique; Committee of the International Telecommunication Union
COBOL	Common Business-Oriented Language
COS	Corporation for Open Systems
CPU	Central Processor Unit
DMBS	Data Base Management System
DRAM	Dynamic Random Access Memory
EIA	Electronic Industries Association
EPROM	Erasable Programmable Read-Only Memory
IEEE	Institute of Electrical and Electronics Engineers
ISDN	Integrated Services Digital Networks
ISO	International Organization for Standardization; voluntary international standards organization and member of CCITT
ITAA	Information Technology Association of America (Formerly ADAPSO)
ITU	International Telecommunication Unio
LSI	Large-Scale Integration
MFJ	Modified Final Judgment
RBOC	Regional Bell Operating Company
UNIX	Proprietary Operating System developed by AT&T; and now owned by UNIX Systems Laboratory, Novell, Inc.

UPS	Uninterruptable Power Source
VAR	Value-Added Reseller
VLSI	Very Large-Scale Integration
WORM	Write-Once-Read-Many times

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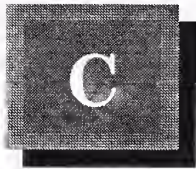
GSA Schedule Service Providers

GSA Schedules for Services [†]

Company	Contract Number	Business Size
Advanced Communications	GS-35F-3401D	Small
Advanced Management	GS-35F-4365D	Small
Advanced Paradigms, Inc.	GS-35F-4271G	Small
American Management	GS-35F-2020D	Small
ANADAC	GS-35F-3014D	Small
Andrulis Corporation	GS-35F-4517G	Large
Anstec	GS-35F-4011	SDA
Anteons	GS-35F-4537G	Small
Applied Techno-Management, Inc.	GS-35F-4451G	SDA
BDM Federal, Inc.	GS-35F-4522G	Large
Blackwell Consulting Services	GS-35F-4515G	SDA
Booz-Allen & Hamilton, Inc.	GS-35F-4057G	Large
BTG, Inc.	GS-35F-2014D	Large
C12, Inc.	GS-35F-4410G	SWO
CACI, Inc.	GS-35F-4483G	Large
CDSI	GS-35F-4415G	Large
Century Technology, Inc.	GS-35F-4604G	Large
CEXEC, Inc.	GS-35F-4453G	Large
Collins Consulting Group	GS-35F-4438G	Small
Comprehensive Technologies	GS-35F-4497G	Large
CompuSearch	GS-35F-2017D	Small
Commputercations	GS-35F-3058D	SWO
Computer Associates International	GS-35F-0051D	Large
Computer Sciences Corporation	GS-35F-4381G	Large
COMSO, Inc.	GS-35F-4422G	Small
Control Data Corporation	GS-35F-4578D	Large
Coopers & Lybrand, LLP	GS-35F-4351G	Large
Cost Management Systems	GS-35F-4476G	Small
Data Networks	GS-35F-4380D	Small
Datarac Information Services	GS-35F-4513G	SWD
DLT Solutions, Inc.	GS-35F-4543G	Small
Edge Systems, Inc.	GS-35F-3105	Small
Electronic Data Systems	GS-35F-3109D	Large

GSA Schedules for Services (cont.)

Company	Contract Number	Business Size
Entex Information Services, Inc.	GS-35F-3114D	Large
Force, Inc.	GS-35F-3132D	Small
GMR	GS-35F-3144D	Small
GTSI	G8-35F-4120D	Small
Harvey Industries	GS-35F-4617G	SDA
I-Net	GS-35F-4131D	Small
IBM Corporation	GS-35F-0001D	Large
Information Builders, Inc.	GS-35F-0043D	Large
Information Engineering Systems	GS-35F-3160D	Small
Information Management Consultants	GS-35F-4406G	Small
Information Spectrum, Inc.	GS-35F-4033G	Large
Information Systems & Systems	GS-35F-4372G	SDA
Infotec, Inc.	GS-35F-4141D	SDA
Innovative Logistics Tech.	GS-35F-4391G	Small
Integraph Corporation	GS-35F-4155D	Large
Inteliscan Systems, Inc.	GS-35F-4152D	Small
Intellisys Technology Corp.	GS-35F-4460G	SDB
IPI Grammtech	GS-35F-4157D	Small
ISI Professional Services, Inc.	GS-35F-4412G	Small
Jet Form	GS-35F-4160D	Small
KAJAX, Inc.	GS-35F-4434G	SDA
KPMG	GS-35F-4338D	Large
Lead Corporation	GS-35F-4465G	Small
Lockheed Martin Federal Systems	GS-35F-4514G	Large
Logic Works, Inc.	GS-35F-3189D	Small
Logicon	GS-35F-4506G	Large
Logistics Management Institute	GS-35F-2051G	Large
Lucent Technologies	GS-35F-4321D	Large
Metters Industries	GS-35F-4184G	Small
Management Applications, Inc.	GS-35F-4419G	Small
Micah Systems, Inc.	GS-35F-4532G	Small
MJR, Inc.	GS-35F-4503G	Large
N.E.T. Federal, Inc.	GS-35F-3217D	Smal
NETLINK Corporation	GS-35F-4197D	Small
Next Computer, Inc.	GS-35F-0058D	Large
Northrop Grumman Data Systems	GS-35F-4005G	Large
NYMA, Inc.	GS-35F-4449G	Small
OAO Corporation	GS-35F-4524G	Large
Open Systems Sciences	GS-35F-4212D	Small
Open Technology Group, Inc.	GS-35F-4421G	Small
Operational Technologies Corp.	GS-35F-4519G	SDA
Oracle Corporation	GS-35F-0189D	Large
Performance Engineering	GS-35F-4366G	Small
Praxis	GS-35F-4224D	Small
PRC, Inc.	GS-35F-4340D	Large
Presido Corporation	GS-35F-3243D	SDA
Pulsar Data Systems	GS-35F-4232D	SDA
Rapid Systems Solutions	GS-35F-4238D	Small

GSA Schedules for Services (cont.)

Company	Contract Number	Business Size
Resources Consultant, Inc.	GS-35F-3257D	Small
RJO Enterprises, Inc.	GS-35F-4395G	Small
Robbins Gioia, Inc.	GS-35F-0070D	Large
Science Applications International Corp.	GS-35F-4471G	Large
Sempaphone, Inc.	GS-35F-3263D	Small
Seta Corporation	GS-35F-4490G	Small
Sherikon, Inc.	GS-35F-4089D	Large
Sierra Management & Tech	GS-35F-4570G	Small
Sierra Systems	GS-35F-4605G	Small
Signal Corporation	GS-35F-448BG	Small
SQLWare, Inc.	GS-35F-4404D	Small
Sterling Software, Inc.	GS-35F-4478G	Large
Sylvest	GS-35F-0113D	Small
Systems, Maintenance & Tech., Inc.	GS-35F-4578G	Small
SYTEL, Inc.	GS-35F-4255D	SWO
Technautics, Inc.	GS-35F-4450G	Small
Techno, Inc.	GS-35F-4480G	SWO
Technology Investment Corp.	GS-35F-3292D	Small
TELE Consult	GS-35F-4280D	Small
Telos	GS-35F-4315D	Large
Tomco Systems	GS-35F-4400G	Small
Trantech, Inc.	GS-35F-4382G	Small
USC, Inc.	GS-35F-3308D	Small
Walcoff & Associates, Inc.	GS-35F-4428G	Large
Wang Federal	GS-35F-3321D	Large

† As of 5/6/1997   *Source: General Services Administration*

Note: Boeing and TRW are among vendors currently applying for a services category (S) under Schedule 70B/C

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